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THE WONDER ISLAND BOYS

THE CONQUEST OF THE SAVAGES

"The warriors, together with the chief and the two boys Jim and Will, rushed to meet them"

[See p. 62]

THE WONDER ISLAND BOYS

THE CONQUEST OF THE SAVAGES

BY

ROGER T. FINLAY

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THE CONQUEST

CHAPTER I

THE COMPACT BETWEEN THE FOUR ALLIED TRIBES

When the morning sun was struggling to come up over the mountains in the east, the whole camp was startled by Sutoto, who, with a number of the Berees during the night, had acted as a picket, to observe the attitude of the defeated tribes.

He made his way to the Professor, who had taken his old place in the wagon. "The Tuolos, Kurabus and Illyas have all united and are now on the big river."

"When did you last see them?"

He held up his fingers to indicate the time, and the Professor called to Will: "Do you know what time he means?"

Will soon interpreted the sign to mean three in the morning.

"If they have not been separated it is a sign that they intend to continue the fight," said John.

"I suggest," replied the Professor, "that we call a council of the principal men in the tribes, and let them fully understand what our aim and desires are, and thus unite the four tribes in a bond of unity. This is a most opportune time."

The news of the obvious action of the tribes to the north was soon learned by all, and when

the Professor's view was communicated there was a universal assent.

Within an hour the chiefs assembled, and the Professor addressed them as follows: "My brothers, I am glad to be able to talk to you, and Uraso and Muro will tell you what I have to say. The Great Spirit sent us here, and we tried for a long time to tell you why we came, but you did not understand it.

"The Great Spirit is the same to all tribes; he does not favor one more than the other, but sometimes one tribe will understand better than the other what he wants, and when they do know what he says it makes them stronger and better.

"We believe the Great Spirit wants the different tribes to live together in peace, and not kill each other, and for that purpose he has given each one something to do. If he does that in a right way he not only helps himself, but he helps everyone else.

"We want to show you how to do this, but before we can start we must all be like one family. We do not ask the Berees to give up their customs and become Saboros, nor do we want the Brabos to do as the Osagas do. We do not care what you believe about this or that, or how you shall dress, or what language you shall speak. The only thing we should be careful to do alike is to so work that we shall not injure each other.

"It will not be hard to learn this, and we will all be patient, and we ask you to be patient with us. We want to show you that the ground is your mother, and when you ask her for fruit she

will give you plenty, and you can soon learn to make things which will make your wives and children happy and contented.

"You will know that anything you own will be yours, and none can take it from you, and if anyone tries to take it, everyone will stand up and protect you. The tribes which are now to the north must be made to understand this, and we must unite to compel them to agree to this manner of living.

"I know that the tribes are powerful enemies, and can bring a great many warriors to fight against us, but we do not want to kill, nor do we want them to kill us. Your weapons are not any better than the ones they have, and we want to make some that will enable us to overcome them, not for the purpose of killing them, but only to protect ourselves and our homes and children.

"If that is what you want and you agree with me that it is the right thing to do, we will help you. To do that you must not fight each other. I have heard that you do not believe in sacrificing captives, as the Tuolos and the Illyas and the Kurabus do, and I am glad of it.

"I am told that you all know Suros, the great father of the Berees, and that he is wise. He is my friend, and he must be present at our councils, but we cannot go to him now, because we must protect our friends, the Brabos, against the warring tribes.

"But we must also be prepared to meet those enemies, and where we live, we have the workshop by which we can make all the wonderful things

needed for our protection. We must go to the Brabos' village, to be on guard, while others must go to our village and bring back those articles, and we will make the things at your own homes, so we can compel those tribes to submit."

These words affected all the warriors, and they gathered around the chiefs and expressed their willingness to do all that the Professor had suggested.

One after the other, the chiefs assented, and the Brabos were especially pleased. Their chief, Oma, arose and said: "We have been fighting our friends, and not our enemies, but we did not know any better. We thought everyone was an enemy. The Great White Chief has told us a new way to live, and we will do whatever he says."

Uraso, chief of the Osagas, held up his hand, and turned to the people: "I was wounded by the White Chief, and he took me to his village and treated me like a friend. He cured me of my wounds, and I became his friend. I left him and tried to come back and tell my people what a wonderful father he was, but the Illyas captured me, and when I escaped, and returned, found my people had gone out to fight him and his people.. This made me sorry. I cannot tell you of all the things I saw at his village, and now let the White Chief say what I shall do and my whole tribe will help him. Muro will tell you what he has learned, because he, too, knows him."

"I do not know how to tell you about this wonderful man," said Muro. "I have seen him refuse to kill his enemies, when he could easily do it. He

healed the Kurabus, and returned him to his friends, and that is something new for us to think about. His enemies are our enemies, and his friends are our friends."

This remarkable scene, which took place on the battle-field, could not be properly understood without some explanation of the preceding affairs in the history of Wonder Island.

About a year and a half previous to this, the Professor referred to, and two boys, George Mayfield and Harry Crandall, who were companions on the schoolship *Investigator,* were wrecked and cast ashore on the island. It was fortunate that they landed on a portion of the island remote from the inhabited part, and for several months had no idea that any human beings lived there.

They had absolutely nothing but their clothing; not even a knife or other tool, but despite this, set to work to make all the appliances used in civilized life. The preceding volumes showed how this was done, and what the successive steps were to obtain food and clothing, and to make tools and machinery.

They built a home, and put up a water wheel, a workshop and laboratory; captured a species of cattle, called the yak, and used the milk for food, and trained the oxen to do the work of transportation; they found ramie fiber and flax, built a loom and wove goods from which clothing was made; they found various metals, in the form of ore and extracted them; and finally made guns, electric batteries, and did other things, as fast as they were able to carry on the work.

In the meantime several exploring trips were undertaken, and they learned of the existence of savage tribes, and what was more startling still, ascertained that other boats, belonging to the ill-fated *Investigator,* had been cast ashore, and later on came in contact with several tribes with whom they had a number of fights, and by chance discovered a tribe, the Tuolos, who held two of the boys in captivity.

These they rescued, namely, Thomas Chambers and Ralph Wharton. Returning from one of these expeditions they found a man at their home, who had entirely lost his memory. This was John L. Varney, a highly educated man, who had seen service in many lands, and later on was restored to reason.

Prior to the present enterprise, which was related in the opening pages, a chief, Uraso, of the Osagas, was wounded and captured by them, and taken to their Cataract home, as they called it, and when healed, he had left them, for the purpose of returning to his own tribe, so that he might bring them to the Cataract as friends; but he was captured and detained.

During this interim, the last expedition was organized, and after some mishaps, they proceeded into the part of the country where the savages lived, and on the way rescued the chief of the Saboros, and also a former companion of John.

Two weeks before our story begins, the Professor was captured by a band of Berees, and taken to their village, where he was instrumental in healing the chief's favorite daughter, and in

gratitude, placed his warriors at the Professor's disposal to rescue his friends, who were about to be attacked by the hostile tribes.

The Professor saw and rescued two more of the shipwrecked boys, who were held captive by the Berees, and together they started to relieve the occupants of the wagon. The various tribes had been at war with each other, and when they learned that the wagon with the whites was entering their country, all sought to effect the capture; but the enmity between certain tribes caused several of them to unite and the three most bitter and vindictive, namely, the Tuolos, Kurabus and the Illyas, were opposed to the Osagas, the Saboros and the Berees.

It was fortunate that all these forces met at the place where the wagon was located, and in the battle which followed, the whites and their allies won. The situation was, however, that the victory might soon be a fruitless one, because the three tribes could muster a larger force than the four tribes now joined under the Professor, and might renew the attack at any time.

"Let us now see what the situation is," said the Professor, to the chiefs. "I have made a map of the island, showing where the various tribes are located, and where the villages are situated, so we may all have a like understanding."

"I would suggest," said John, "that a part of the force be sent to the Cataract and bring all the machinery and stock we have at that place, to this part of the island, where it can be set up and

operated. In that way we can the more readily teach the people how to do the work."

"That is absolutely necessary, as it is too far off where the plant is now located, to be of service to us."

"If you will allow me to say something it might help us," remarked Muro. "Let the Pro-

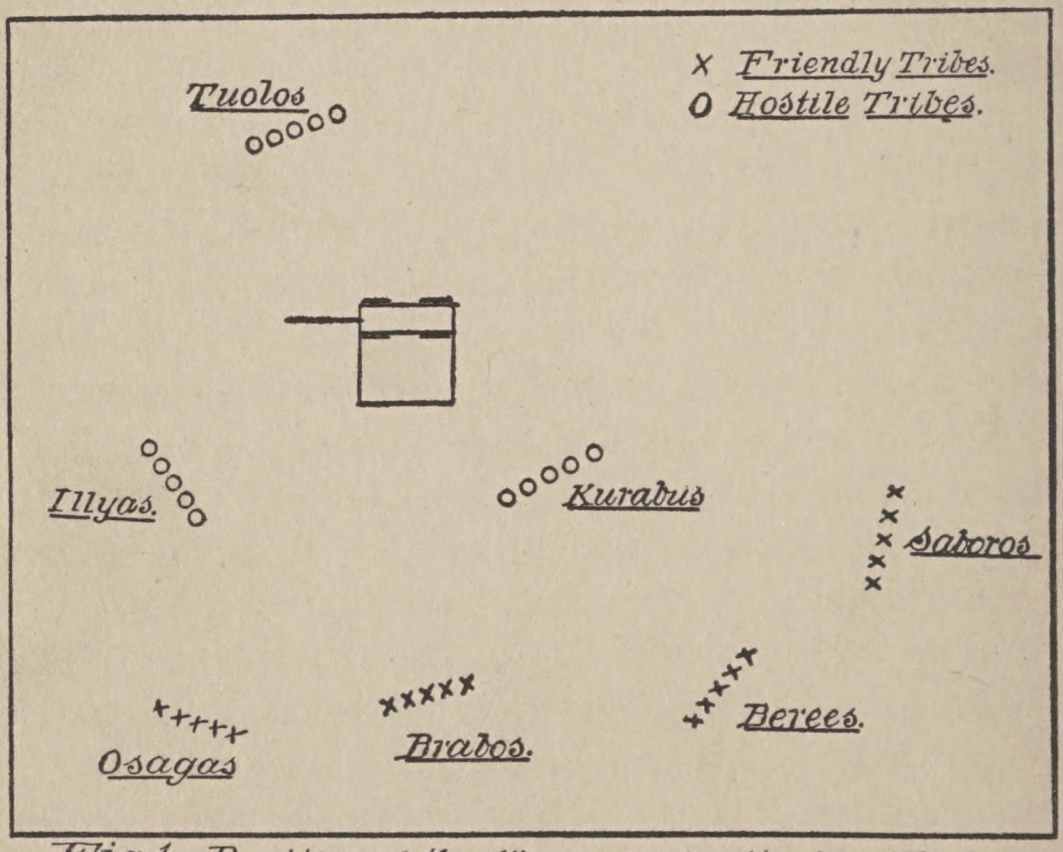


Fig. 1. Position of the Wagon and attacking Forces.

fessor select a certain number of warriors from each tribe, to go to your village and bring the things here, and others will remain, and watch our enemies."

"That is a good idea," observed Blakely, "but before doing that I think we ought to muster our forces, so that we may know what we have to

depend on, and the chiefs can tell us who are the best fitted for the various tasks."

"Your view is the correct one," answered the Professor, "and Muro, you, Uraso and Ralsea, inform all of them what is required. I shall expect you, Blakely, to take charge of the mustering of the forces."

The suggestion was understood and agreed to by all, and the various tribes were arranged in columns.

The Professor addressed them as follows: "In our country, we have a plan for everything we do, and everything is done in order. We try to follow the plan in which the Great Spirit orders everything done. We want every man to do something and be responsible for one part of the work."

"While the people are gone to the White Chief's village, others might go to the Berees' village and bring the Great Chief Suros, as he is wise, and we should like to have him here," added Uraso.

"Your suggestion," said the Professor, "is a wise one, and it will show how earnest you are in making this bond a lasting one among you. I thank you for calling attention to the matter, and it shall be acted on at once."

The muster roll, as prepared by Blakely, showed the following results:

The Berees: Sub-chief Ralsea and eighty-five warriors.

The Osagas: Chief Uraso, two sub-chiefs and one hundred and ten warriors.

The Saboros: Chief Muro, three sub-chiefs and one hundred and fifteen warriors.

The Brabos: Chief Oma, two sub-chiefs and one hundred and five warriors.

The whites were enumerated as follows:

The Professor.
John L. Varney.
Samuel Blakely.

The boys: George Mayfield, Harry Crandall, Thomas Chambers, Ralph Wharton, James Redfield, William Rudel.

The combined force thus numbered four hundred and twenty-four, not counting Angel. It should be said that Angel was an orang-outan, captured while a baby, and he had been educated by George to do many wonderful things. It is well known that these animals are great imitators, but this one really learned many useful things. One of them was to climb the tallest trees and warn George of the approach of enemies, and this was such a wonderful thing, that Muro explained it to his people and they really admired the animal, and who was, in consequence, a great pet.

When the council met the Professor said: "I will detail one hundred and fifty men to accompany John to our village to bring the things from that place, and those remaining will go to the Brabos' village to watch our enemies and to protect the home of our friends. Ralsea should take the litter and twenty men and go after the Great

Chief Suros, and bring him here, so that we may consult with him."

"We have thirty guns," said John, "and at least half should be left with you while we are away."

"It might also be well," remarked Blakely, "to have the different chiefs select the most competent men in the four tribes to whom instructions might be given in the use of the guns, and I will drill them and show how to handle them to the best advantage."

The four chiefs selected the men for the expedition from the respective tribes, and the four boys who had been together for so long, begged that they might be of the party also, and the Professor could not deny them this privilege.

Early in the morning the entire force started on the march for the Brabos' village, and before night arrived at the main one, where the Professor and his party had the first close sight of the village and the inhabitants.

Runners were sent ahead to inform the people of the expected arrivals. This was the first time in the history of the island that a foreign tribe had ever visited them, except in a hostile manner, and the curiosity of the women and children was intense.

Oma, the chief, had graciously ordered the best hut for the Professor, but he declined it with many thanks, and presented the chief's wife with one of the mirrors, which delighted them. Some of the warriors were designated to procure game, and others to bring in wood for the fires, and the

most skilled were selected to scout to the northwest to determine the movements of the enemy.

In the morning, John and his party, with the wagon, started for the Cataract home. Uraso and Muro were designated to accompany them, and you may be sure that to the boys this trip had in it every enjoyment that could be brought to them.

"What a difference there is in things, now," mused Harry, as he drove the yaks along. "I hope they will have no trouble with those treacherous tribes until we get back."

"It makes me sad to think that we have to give up the Cataract," said George. "The past year has been a happy one to all of us, even though we have had serious times. And what shall we do with the flag?"

They had made a beautiful flag, which floated from a tall staff on Observation Hill. It would have been a grief to permit it to remain.

John overheard the conversation. "Yes; we shall certainly take it with us, and teach the natives here to respect it." And the boys applauded the sentiment.

In two days more the party sighted the Cataract, and saw "Old Glory" floating from the mast. When they saw it again, they took off their hats and gave three cheers. This so astonished the natives that they could not understand it, and Uraso told his people that the flag was worshipped by the white people.

"Did you hear what Uraso told them?" asked John.

"No; what was it?"

"He said that white people did not carry individual charms to ward off troubles, but that they had the flag for that purpose, and the one flag was the charm of all the people; and he also told them it was made a certain way for that purpose."

CHAPTER II

BUSY TIMES AT THE CATARACT. THE ALARMING NEWS

THE flag incident, and Uraso's interpretation of it, amused the boys immensely.

"Do you know why Uraso thought so?" asked John.

"No; I can't understand why he ever had such an idea," replied Tom.

"You forget it has been our custom, ever since I can remember, to go to Observation Hill, each day, to watch the sea, in the hope that a vessel might be sighted. Uraso thought that was intended as a tribute to the flag."

"After all," said Ralph, on reflecting, "they are not so much out of the way, and the flag is really our talisman, isn't it?"

"Yes; because it is a real protection, and not a fancied one. It is a symbol, behind which lies all the power of a material kind, which is able to help us everywhere, and among all people. The charm which the savage wears, is a symbol to him. and that typifies protection from some unknown power. To us that is a reality, and we know where the power is."

The dear old Cataract home. How the boys roamed over every part of it, and went down where the cattle were still ranging around. The place was a study for the warriors.

"Now, boys, for the first day entertain your visi-

tors, show them everything, and amuse them in every way possible; and after to-morrow we must commence work in earnest," was John's injunction to the boys.

What could be more natural than to start the water wheel in motion? The warriors stood on the bank, watched them push it in place, and then the sawmill was started. The process of turning out lumber with the saw was marvelous. Every part of the shop was filled, as the boys set the grindstone, the lathe, and the gristmill into motion.

When a log was finally secured to be cut into shafts for spears, and they saw the wood-turning lathe make the shaft round and true, their enthusiasm knew no bounds.

"Tell them, Muro, that is what we want them to do," said John," and they opened their eyes at the possibilities.

There was still quite an amount of barley which had not been ground, and the willing warriors helped the boys bring a lot to the mill and the production of the flour before their eyes was such an amazing thing that they could not even give vent to their expressions.

Early in the day one of the bullocks had been killed by John's order, and a roasting pit dug out, and this was now being prepared for the principal meal of the day, and many of them were interested in this new way of roasting an entire carcass.

A quantity of vegetables had also been gathered by the parties detailed for the purpose, and George

was the busiest of the lot, as he personally attended to the cooking of the various dishes. He had most willing helpers, each one trying to lend a hand, so that he did little more than direct.

But he was determined to have bread, and it did not take long to improvise an old Dutch oven with the firebrick, and in this a fire was built, so

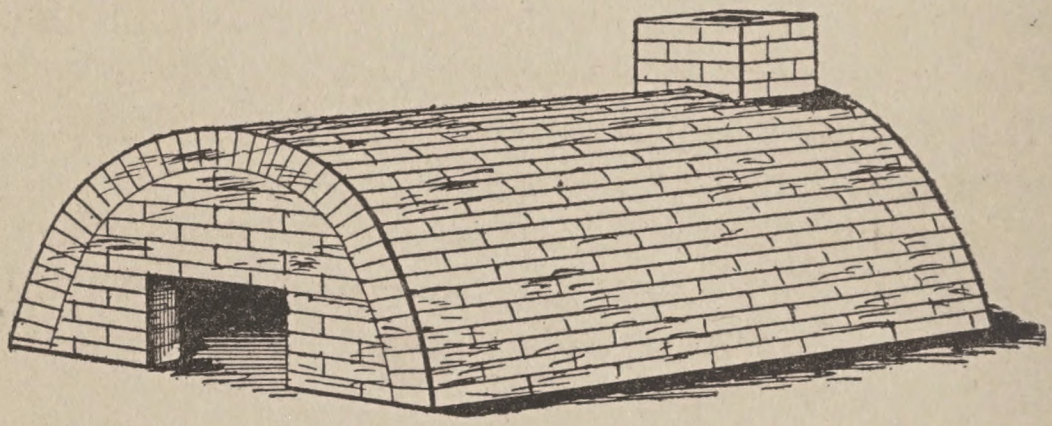


Fig. 2. George's Old Dutch Oven.

that the bricks were heated up intensely, and the fire then withdrawn, and a cover put over the chimney. The heated brick, therefore, did the baking. Loaf after loaf was put in, and while the dough had not risen as it should have done, owing to lack of time, still the bread produced was something so unlike anything the natives had ever seen, that the making of it in their presence was a joy, to say nothing of the eating of it when the meal was served.

It was not only a picnic; it was a feast. None there, excepting Uraso and Stut, had ever tasted such things before. They knew what honey was, but sugar was a novelty, and this was supplied

without stint. George had no opportunity to make any delicacies in the form of cakes, but he made a barley pudding in which was a bountiful supply of sago.

After the meal, John called the boys together and said: "Before dismantling the place here it has occurred to me that there are some things which we ought to make, because it will take some time to set up the parts, even after we get them in the new locality. I believe we still have quite a quantity of the cast-steel bars, from which we intended making gun barrels."

"In looking over the stock to-day," said Harry, "I find we have sufficient to make at least fifty barrels, and I have prepared the lathe to do just what you have suggested."

"Good boy," responded John. "You and Tom keep at that, and don't mind about anything else. If we can once get the barrels bored out, and the fittings made, we can put them together without having the shop in running order."

"In talking with Harry yesterday," said Tom, "we made up the scheme of putting a small bench in the wagon, with the vise, so that we can put together some of the guns on our way."

"All that is in the right direction. And now, another thing. The wagon we have is not at all adequate for what we have to take with us, but we have plenty of people to carry things, and they will be glad to do it, but some things are very inconvenient to carry, so that it will be of material assistance if we build another wagon."

The boys looked at John, merrily laughing at the suggestion.

"Just the thing," said Ralph, "and it is easily done. We still have the old wheels that were used before we built the last set."

"Quite true; I had entirely forgotten about that. Uraso will help, and will be just the fellow to direct his men. Now let us start at this with vigor. We must return as early as possible. The hostiles may attack the Professor at any time, and the weapons are necessary articles."

As they were about to separate, Harry remarked: "We have a quantity of the iron which we made, and instead of carrying it along in the wagon, it occurred to me that we ought to forge out some spears and bolos."

"I had counted on doing that myself, but many thanks for the suggestion," answered John.

There was one thing noticeable in all the warriors, and that was the universal tattoo. This was something practiced by all. Referring to the custom, Ralph asked: "What is the cause of the tattooing habit?"

John looked at him with a smile, as he answered: "People who wear few clothes want something with which to decorate themselves. The idea always was and always will be, to improve on nature. That is one of the reasons. The other is, that it was an original way of distinguishing one individual from another. You will notice among these people, that the chiefs have a different tattoo from the others in the tribe."

"Do you mean that the name of each man

was tattooed so he would be known in that way?"

"Yes; and also to designate his rank. The names of great warriors and wise men of the tribe are generally descriptive. The North American Indian adopted that course, and it was a very sensible thing to do. You have heard of Sitting

Fig. 3. The Tattooed arm. Antelope.

Bull, Rain in the Face (that is, a pock-marked individual), Antelope, and others of like character, could be drawn, and thus convey the name without difficulty. Uraso and Muro mean some particular things or objects which can be depicted, and thus one tribe can communicate with the other, even though they do not understand each other's language."

"Then clothing is also another way of showing rank or title?"

"In countries where people are compelled to wear covering as a matter of comfort, the clothing was adopted as a means of expressing the person's position in life."

After John and his party left the Brabos' village, the Professor called Blakely into consultation, and advised him to organize the remaining warriors into some cohesive form, and provide a definite and orderly plan of carrying out the scouting and picketing tactics necessary to keep them advised of the movements of the hostiles.

Blakely had already acquired a fairly good knowledge of the rudiments of the native tongue, so that he was able to get along well in giving his orders and disposing of the warriors. He was ably seconded by Ralsea and Sutoto; and especially, the latter, became one of the most important factors in the organization of the tribes in making a strong and intelligent fighting force.

Two days after John left, it was announced that the old Chief Suros was on his way from the southern part of the island, and the Professor headed a party of thirty picked men, accompanied by Sutoto, to welcome him. The warriors were taken from the four tribes.

They met the litter, bearing the Chief, fully five miles from the village, and Suros was visibly affected at the honor shown him. The Professor extended every act of courtesy, and when they arrived at the village, the Professor was quick to give him the full details of all the happenings since their last interview.

"We have talked over the plans to make you

and all of your people happy and strong. I have sent a number of the warriors to my village, and they will bring all our things with them, so that we may put them up in your country, and teach your people how to build and to make useful articles, and beautiful ornaments."

"I have heard the wonderful things which you have done, and what you have promised, and we will try and follow your words," he answered.

"I have told the people that you must be here, as we value your wisdom. We would go to you, but we still have powerful enemies to the north, and they are waiting to attack us. Until we are safe from them we cannot go to you; but when my people return we will be better prepared to resist."

The chief was visibly affected at this consideration for him, and he thanked the Professor for sending the messengers.

The boys, Jim and Will, were interested observers in all that was taking place, and the Professor had them about him at all times, and to them he communicated his orders. Their ready understanding of the native tongue was a great help to the Professor.

It was for this reason that the Professor was glad the two boys were content to remain with him. Speaking about the savages, to the Professor, Jim remarked: "There is always one thing which seems singular about these fellows. They are awfully quick at learning. Now, what I can't understand is, that, quick as they are, they

do not seem to advance very much, but stay in the same rut right along."

The Professor smiled at the observation, as he replied: "Sir John Lubbock, a noted English naturalist, sums up his estimate of the savage mind in the following statement: 'Savages unite the character of childhood with the passions and strength of men.' Their utter simplicity is their weakness. When that is aroused, if properly done, they become men."

"But what is the great difficulty in the way of their advance?"

"The greatest writers seem to agree that the primary want of the savage is a rigid, definite and concise law. The idea of order does not appeal to him, except to a limited extent. Like children, they do not go beyond the immediate thing. The reasoning faculties are not impaired, but are undeveloped."

But Jim's observation was true. Blakely early discovered this in treating with the natives, and it did not take long to make them understand that by working together for the common defense they could be made far more effective than by permitting each to do as his own impulse dictated.

Thus, by constant association with the head men in the different tribes, he early learned who were the best runners, and the most skillful scouts, and who were particularly reliable for the different branches of the service.

Sutoto, as stated, was the most valuable factor, and the Professor grew to love him. One day he came in great haste, and said: "I have news for

you. The tribes are directly north of us, and appear to be moving to the east."

"Do you know how large a force they have?"

"Fully three hundred."

"Have you any theory why they have not attacked us before?"

"I think they are sending for more warriors."

"How many more can they depend on from their tribes?"

"Not more than one hundred and fifty or two hundred."

"Do you think it is possible, Blakely, that they have learned of the force which we have sent to the Cataract?"

"This movement to the east seems to indicate it."

"In order to satisfy yourself it would be wise for you to ascertain their actions at once."

"I have selected a hundred picked men, and shall take the field this afternoon. I have suspicions that they are delaying on account of reinforcements, or waiting for reports from the runners which they have, no doubt, sent to the Cataract."

"I was rather stupid in that matter," exclaimed the Professor. "I had overlooked the fact that the Kurabus were the ones who attacked us at the Cataract, and as they know its locality it is but natural they should make an advance in that quarter."

Blakely and his men were on the way within a half hour after this conversation. This was now the fifth day after the departure of John.

The Professor, and the chiefs, Oma and Suros, were in daily consultation, and together were developing a plan by which the different tribal interests could be welded together, and to establish a form of government which would be agreeable to all.

On the morning of the sixth day, after John's party left the Brabos' village, three of the hunters who were of the party delegated to bring in game, and one of whom had been instructed in the use of the gun, captured two Kurabus within a mile of the Cataract.

These were brought to John at once, and there was high glee at the success of the hunters. Harry was the first to see the captives and he rushed in to John with this information:

"The hunters have captured two Kurabus, and who do you suppose is one of them? He is the fellow we wounded and brought here with us. Don't you remember the one we carried out at the time I put an inscription on his litter?"

John smiled, as he recalled the litter. His association with the different ones made him fairly well acquainted with the language by this time; but Uraso and Muro were present. As they were brought in, John looked at them and his brow darkened, as he addressed them sternly.

"Why are you here?"

They cringed before his piercing look.

"Answer me! Do you want us to kill all of your people? Did you tell your chief when we let you go, that we did not want war, but peace?"

Neither of them answered, but shrank back.

John assumed a terrible anger, as he continued: "We healed you, and tried to show our friendship, but you tried to kill us. Is that what you people believe in?"

Tama, who was the warrior alluded to by Harry, soon recovered his speech, and after glancing around at the chiefs, said: "The chiefs would not believe what you said."

"What are you here for now?"

"I was sent here to see what you were doing."

"How many were sent?"

"No one but Reto and myself."

"Lock them up," said John, "and keep a good guard over them. So that is their game, is it? So much the more important for us to get the weapons ready."

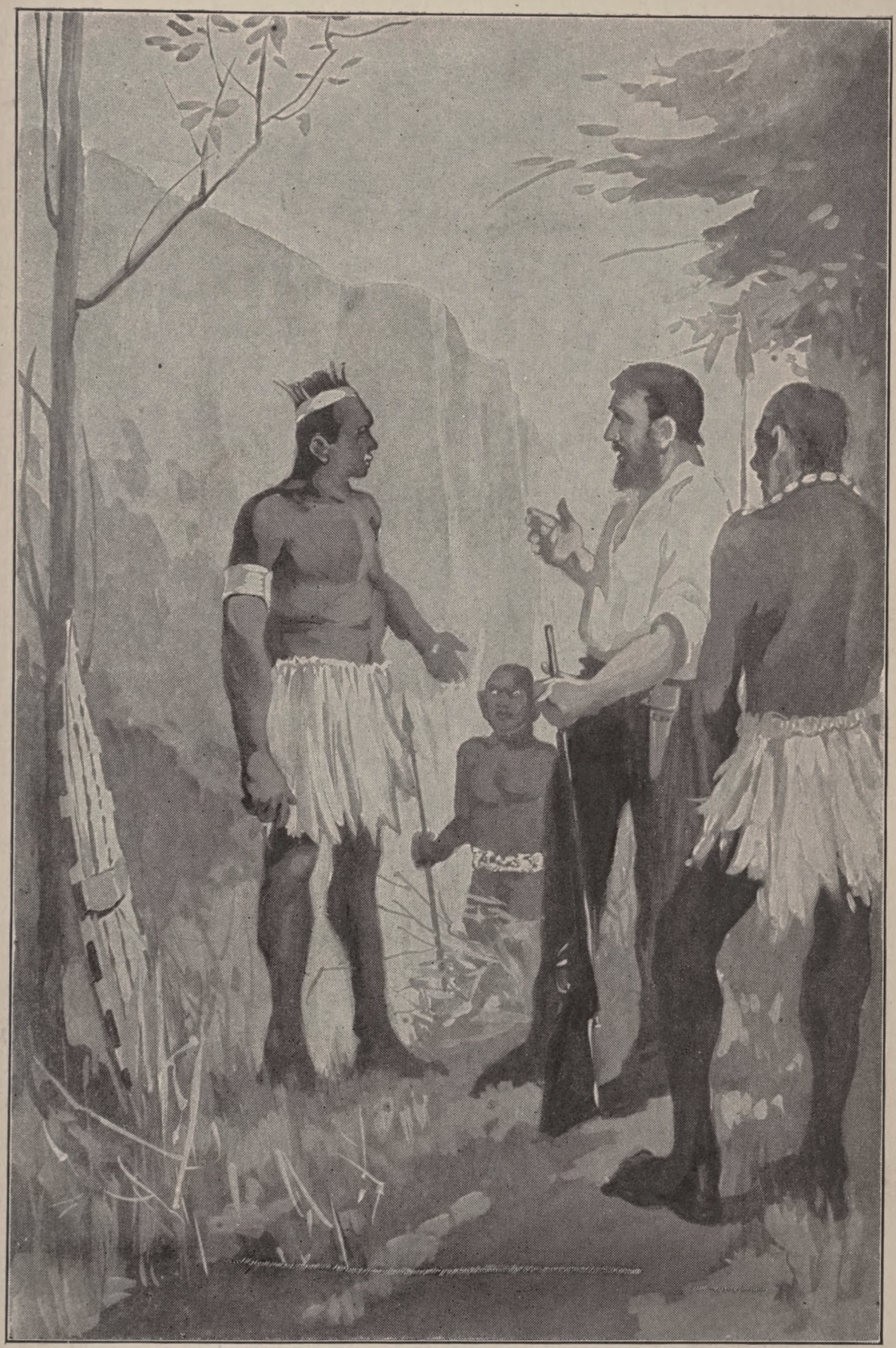
The new wagon was now ready for the top, and this was completed in short work. John started on the bolos immediately, and also forged out a number of spears. The boys were set to work preparing the stocks for the barrels, and these were cut out in the rough at the sawmill, and several more knives prepared. The most skillful of the warriors were then instructed to dress them up and get them ready for the barrels.

The work was prosecuted not only during the day, but at night, as well. It was fortunate that during the time the yaks were lost, some months before, they had trained a pair to drive, and these were now again yoked up to give them experimental training for the coming journey.

Meantime John consulted Muro and Uraso, and the three picked out the most trustworthy scouts.

Giving them explicit instructions to proceed westward, and discover, if possible, whether their enemies were making any movement toward the Cataract, and if, on the other hand, the movement was toward the Professor and the Brabos' village, to send one runner to the village and the other back to the Cataract.

In less than ten days' time Harry had turned out thirty-two barrels, and John had given a great deal of attention to the preparation of the ammunition.



"Meantime John consulted Muro and Uraso, and the three picked out the most trustworthy scouts"

[See p. 35]

CHAPTER III

INTERCEPTING THE MARCH OF THE CONFEDERATES. THE TREASURE

BLAKELY started north with the picked warriors, and before evening came in sight of them, headed for the east. It was evident that they were about to go to the Cataract.

Sutoto begged to be permitted to go there and inform them of the danger of attack, and Blakely consented, and without waiting for the morning, was on his way. He traveled most of the night, reaching the place in the afternoon, and was received by John and the others with the most effusive welcome.

"What are you here for?" asked John hurriedly.

"The tribes are coming this way."

"I have just learned from one of our runners that they went far to the north of you, and assumed that the intention was to attack us."

"The Professor should be warned at once," was Sutoto's response.

"I have instructed that to be done," answered John.

The scenes around the Cataract were intensely interesting to him. He wandered around with the boys, and asked questions on every conceivable subject. Blakely had given him one of the guns, and he was taken to the workshop and told

how they were made. These things so fascinated him that, hungry as he was, he could hardly be induced to take time for his meals.

The boys admired him immensely, and together they acted like boys. The water wheel; the sawmill; the two stones which served as the gristmill; the grindstones; the lathes; and the little foundry were entrancing.

When the boys took him to the blacksmith shop, and he saw the forge, and the numerous spear heads which John had turned out, as well as the bolos, his eyes showed the intense delight the sight afforded him.

The next morning one of the runners appeared and stated that the tribes were still waiting, and also imparted the further information that Blakely and his party were at a safe distance, and unknown to the hostiles.

It was obvious now that they were awaiting the arrival of the two scouts who had been captured before advancing. Several scouts and runners were again sent forward, with instructions to return with information the moment an advance was made.

When Blakely reached the vicinity of their confederated enemies, he thought it wise to keep in the background, and was at a loss to account for the delay during the entire day, but before evening one of the Berees, who had been sent by John, arrived in camp.

"I have just come from the white man's village, and they know that the tribes are moving in that direction."

"How did they discover it?"

"We captured two spies and have them as captives."

This information suggested the cause of the delay. He immediately called a runner, and indited the following letter: "I am keeping on the watch, and am not afraid to attack the whole of them, if need be. If the guns you are making are not completed, do not worry about it, as I shall keep them interested here for several days longer. I will not appear unless I find they have taken up the march in your direction. Blakely."

The following day the scouts informed Blakely that the allies had broken camp and were about to move to the east. Calling the warriors together, he addressed them as follows: "My friends; we are about to meet your enemies, not for the purpose of fighting them, but to prevent them from attacking our friends at the white man's home. Our friends there are preparing the fire guns for us, before they come to us, and we must now stand together to prevent them from going there until we are ready to meet them."

The warriors all crowded around, and showed by their attitude that they could be depended upon.

"We have with us eleven fire guns, and I will now tell you how we must fight them, if it is necessary. I will stand in the center of the front line, with the guns, and on each side of us will be the ones I shall select. All those in front will have bows and arrows, but you will not need them, unless they come up too close. We must now

march to the right, as fast as we can, and get between them and our friends."

The column started out on its mission, and made its way with the utmost speed to the east, and before noon turned to the north, being thus placed directly in the path of the oncoming forces. The allies moved along deliberately, entirely unaware of the existence of any force.

Before four o'clock the first signs of the advance were observed. Blakely had selected a strong position on a slight elevation, on the east side of one of the little streams which flowed into the Cataract River, that commanded an open front. His entire force was placed between two natural objects, the right resting behind a rocky projection and the left to the rear of a heavy chaparral of wood.

Entirely unsuspecting, the allies marched along the stream, and crossed not a hundred yards below. When they were within hailing distance, John and Ralsea suddenly appeared in front of their concealed column, and the latter, at the instigation of Blakely, addressed them as follows:

"The white men do not want war, but peace. They have come only to rescue their own people. You must give them up, or there can be no peace. The white chief tells me that if you injure or kill the white men you now have he will hold you responsible, because he is powerful, and is now ready to destroy you and your wives and children, but he does not want to do that. We are here to prevent you from going to the white man's house."

The consternation on the faces of the savages, at

the appearance of two, was easily discernible. They listened in silence while Ralsea spoke, and then indicated that they would hold a council and give their answer.

It was evident that the allies were taken by surprise, and it must have been obvious that they had no idea of the force which was in their front. Blakely had wisely stationed pickets to the right and the left, in order to observe their movements after the first surprise was over.

The conference lasted until night fell, and thus the first object was gained; delay. In the morning one of the chiefs appeared, and Blakely and Ralsea again went to the front.

"I will give you our answer," he said. "The white man attacked us, and we fought him back. He has killed our warriors, and we will not treat with him at this time."

Ralsea replied: "You have done the same that we have done toward the white man; we were always the first to attack them. They tried to be friendly, but we would not listen to them."

"We will let you know in two suns what our answer is." And he withdrew.

"That means," remarked Ralsea, "that they are waiting for reinforcements."

"So much the better. We will be reinforced much better than they by the time their reinforcements come to hand."

"We must send a runner to the Great White Chief, and tell him to stop the Kurabus from coming to their assistance," said Ralsea.

"That is a wise suggestion," answered Blakely;

and without delay one was selected and made his way to the Brabos' village.

When the Professor received Blakely's note he called in the Brabo chief, Oma, and said: "The forces we sent out are preventing the allies from going to our village, and have sent a runner here to inform us that the Kurabus are about to send more warriors to aid our enemies. Select one hundred warriors and let us go to the Kurabus' village and capture the warriors who are there, and also put the villages in our power. This may make them understand that they have no homes to go to unless they come to us."

This information delighted Oma, and he hurriedly gathered the warriors, and the Professor concluded to accompany them, as he did not want the warriors to commit any excesses against the villages and inhabitants of their former enemies, or exact any reprisals for the past indignities that some of them had suffered from the Kurabus.

A day's march brought them close to the main village, and scouts were sent to the front to ascertain whether the warriors still remaining in the village had gone forward. Before the scouts could return fully fifty warriors emerged from the village, and were taking up the march to join the allies.

The Professor instructed the warriors under his command to divide into three parties, one to remain with him, and the others to go to the right and to the left, so that the Kurabus would thus be entrapped.

The party marched forward unsuspectingly, di-

rectly toward the position occupied by the Professor, and he instructed Oma to show himself and inform them that they were surrounded and that resistance would be useless.

Some, more venturesome than others, started to retreat, but the unexpected appearance of the Professor's warriors drove them back, and without firing a shot or loosing an arrow they submitted. When the Professor appeared they were the more surprised. The whole were marched back to the village, and, although the women tried to escape, all were soon rounded up and brought back.

The captured Kurabus warriors were taken to the Brabos' village, and the women informed that they would not be injured, as the white man did not believe in making war.

The Professor at once sent a runner to Blakely and also to John. Two days afterwards the runner appeared at the Cataract with the following message from the Professor:

"We captured the Kurabus' village to-day, and all the warriors left there, as they were about to leave to join the forces now before Blakely. We have taken all of them to the Brabos' village, where they will be held. Make the utmost speed with the weapons. In the meantime, I have sent a force to the north to intercept any reinforcements that the Tuolos may forward."

The message from Blakely was as follows: "We arrested the movement of the allies yesterday, and asked why they were determined to attack us. They refused to give an answer, and they are, probably, awaiting reinforcements. My forces are be-

tween them and the Cataract, and they will give their answer in two days."

All this news was imparted to the people, and the knowledge was received with enthusiasm. It gave the warriors the first glimpse of the value of cooperation, and the benefits of a directing hand in their affairs.

At the Cataract matters were progressing favorably. Reports from Blakely and the Professor assured them that they would have no difficulty, in a few days, in getting at least thirty of the guns ready. Stut proved himself to be the most apt pupil, and nothing interested him as much as the forge and anvil, and John, noticing this, set him to work on the small anvil to forge out arrow heads.

The arrows used by the natives were uniformly of stone, but the metal ones were perfect, and so arranged that, with the ramie fiber, could be readily attached to the shaft. The most deft workers in the making of the native arrows were selected, and together they made up a large quantity of arrows, and Stut seemed to be indefatigable in turning out the heads for the workers.

During this period the larder was not forgotten. The hunters brought in every day an immense quantity of taro, which seemed to be their favorite vegetable.

This is a stemless plant, which has heart-shaped leaves, about a foot long, and the leaves and stalks are prepared by them in the same way that we use spinach and asparagus.

But the tuber, or root, of this vegetable is the

most valuable part. It is larger than the common beet, and sometimes grows to a foot or more in length. This was beaten into a pulp by the natives, and made into a bread or pudding.

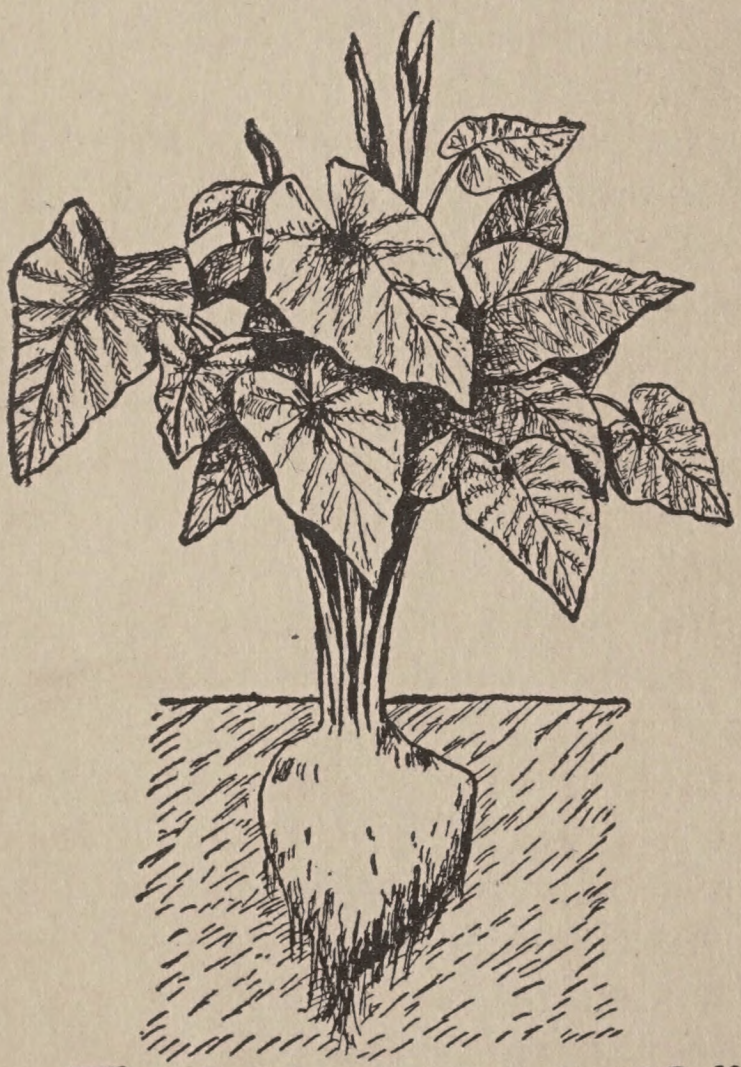


Fig. 4. The Taro Plant and Bulb.

"I like the taro," said George. "It can be used in so many ways, and I want to try it in the different forms as soon as we have an opportunity."

"In the Sandwich Islands, and in many other places it is the vegetable from which the well-known Poi is made," said John.

"Do you know how it is made?" asked George.

"It is beaten up, just as you see them do it here, and then set in the sun to ferment for about three or four days. It is afterwards boiled with fowl, and makes a very pleasant dish, most appetizing and nourishing. The fermented Poi will last for weeks. It is the same as the well-known kalo of the Pacific Island, the yu-tao of China, the sato imo of Japan, and the oto of Central America. A fine dish is made of it by boiling and then covering the leaves with a dressing of cocoanut oil."

Harry and the other boys had been in consultation for several days concerning the cave, and a day or two before they were ready to start had a talk with John about the treasure there. John listened attentively, and when they had finished, said:

"You are quite right in wanting to take care of the valuables there. You are entitled to them."

"But they are yours, as much as ours, and we shall not touch them unless it is with the understanding that you shall share with us," responded George.

"I could not consider it for a moment."

"You cannot help yourself," said the boys in chorus. "We have arranged all that matter, and you have nothing to say about it."

"But," protested John. "I do not deserve it."

"Well, do we?" asked Harry.

"But you and the Professor discovered it."

"Before you or Ralph and Tom came we arranged the division, so that the Professor has one-

third of it, but we own two-thirds, and that we propose to divide equally among all of us," added Harry.

"Really," said Ralph, "Tom and I are in the same position as John, and we feel it is not right to take a share, but the boys insist on it."

"Well, if you consider that a settlement, I must say that I am going to make good more than my share and the shares of Ralph and Tom."

"We don't want you to make it good," insisted George.

"But you can't help yourself in that. The cave in the Tuolos' country has something in it that will make you wonder as much as the treasure you have here, and it will be fully as interesting to get at and recover as anything you have experienced here."

"When do you think we ought to start for the west?" asked Harry.

"Day after to-morrow will see everything ready. We shall then have all the ammunition sufficient to last us until we can reestablish the plant, and as the new wagon is ready, it should not take us more than a day, with all the help we have, to load and apportion the different loads among the warriors."

"Then why can't we take to-morrow for the expedition to the cave?"

"That will suit admirably," he replied.

On the following morning the boys had the yaks yoked up, and taking with them a number of the copper vessels, and a quantity of the ramie cloth, drove over to the side of the hill opposite the Cata-

ract house, so as to reach the land entrance of the caverns.

"It is not desirable to have any here know of our visit nor our purpose. It would not make any material difference, as the treasure there is of no value to them; but our motives will be misunderstood," remarked John.

Under the circumstances John and the four boys were the only ones in the party.

"We are going to have some pretty tough work this morning. That gold weighs something."

"Wasn't it a good thing you suggested the making the wagon?"

John smiled without saying anything.

The boys eyed him sharply, and finally Harry said: "That is what you suggested the new wagon for, was it not?"

John nodded an assent.

"Did the Professor say anything to you about bringing it along?"

"He did say it might be taken if you thought so."

"Didn't he suggest that we should do so?"

"No; he said the matter was left entirely to your judgment, and that I should not say anything about it, unless you proposed that course."

"Well, I am thinking we shall have a pretty good load for one team with what we get out of the place," said George.

"It will make a good load, but we can add to it the lightest parts of the stock we have at the Cataract."

Before reaching the mouth of the cavern, a

messenger hurried over from the Cataract with the information that two runners had arrived from the Professor and from Blakely, and they drove back as quickly as possible, and reached there to learn that another had just arrived from Blakely.

The two runners first to arrive conveyed the information stated in the previous chapter, but the last carried the additional news that there had been a fight between Blakely and the tribes, and that he was slowly moving back to the Cataract, but there was no occasion for alarm.

The latter part of the note read as follows: "Do not be alarmed and continue your work, and if the matter should be at all serious I will advise you by runner in ample time, and shall in any event send another in the next four hours."

John called in Muro and said:

"The forces with Blakely are having a fight with the tribes. I want you to take fifty men, and also twenty-five guns, and assist Blakely and his warriors, and keep me informed of the progress of events. Tell him that by day after to-morrow we shall be on our way. In the meantime you should draw them this way, as we do not want them to go back. For that purpose keep up the show of retreating, and hold them until day after to-morrow."

Within an hour the column was ready and moved toward the scene with celerity, equipped with the new guns, and an ample supply of ammunition, together with the new arrows which had been made.

CHAPTER IV

THE SURRENDER OF THE KURABUS

It was late that afternoon before John and the boys again drove over to the hill, and lost no time in entering the cave. The first care was to bring to the steps at the entrance all the vessels in the first recess.

Some of them were so heavy that it was necessary for four to carry each load. They then proceeded to the inner recess, and here a search was made for every trace of the treasures there, the time required thus making it almost dark before they were able to carry out all the different lots.

These were all stored in the bottom of the wagon. It was dark as they started for the Cataract. As they were leaving they heard the night cry of a bird which had often been noticed before, and Ralph shuddered, as he said:

"It makes me tremble whenever I hear that doleful sound. It was above our head all of the night before the Tuolos captured us, and since that time it always sounded like an omen to me."

John turned to him, as he replied: "That is the voice of the bird called by the Spanish, Alma Perdida."

"Well it isn't a pleasant sound, to say the least," added George.

"It is very significant at this time, however," remarked John.

The boys all turned to him, as he continued: "It is the 'Cry of the Lost Soul'; that is what the name signifies."

And the boys thought of the terrible tragedy in the cave they had just left. The silence on the way home was significant.

The next morning marked the greatest activity in and about the buildings. The wagons were first loaded with the things contained in the shop, the laboratory and the home. Numerous packages were made up in form for the warriors to handle conveniently. Nothing was permitted to remain, as it was felt that the things they had made were too valuable to leave behind. It was past noon before the last articles were secured in bundles.

"You should explain to them, Uraso," said John, "that we shall have to give them pretty heavy loads for the first part of the journey, as the different things can be distributed to the others when we reach them."

"It will not be necessary to do this," he answered; "they are only too glad to carry the heaviest loads." And he refused to apologize to the warriors. This is referred to for the purpose of showing the spirit in which all of them worked to bring the things to their own country.

After the loads were all provided for, and the different ones instructed as to the parts which should be taken by each, John said:

"There is one thing which must now take our attention, and that is the bringing in of the flag."

The boys had forgotten this. "You may tell the warriors," said John, addressing Uraso, "that we

intend to go to the hill and bring in the flag, which must be taken with us."

As Uraso interpreted this to the people it had a remarkable significance to them. Uraso begged permission to take all of them on the expedition, and this was readily assented to.

The warriors all armed, as though going forth to battle, ascended the hill, with the boys in the lead. Arriving there John formed the column in a circle around the staff. Angel was present, and he shambled toward the pole and mounted it. He remembered the little wheel at the top, which had afforded them such an amusing incident when it was erected.

This time he came down without much solicitation on the part of George.

"As George and Harry were the ones to hoist the flag, I shall delegate them to lower it," said John.

The boys went forward, and at the quiet suggestion of John took off their hats. At this signal John took off his, and Uraso followed suit, and the hint was sufficient for the warriors, who stood with uncovered heads while the boys reverently lowered it.

The wonder and amazement depicted on the faces of those who witnessed it was a spectacle. What an impressive thing it was to them; it was the mystery, which to the savage mind is always an important factor, and John knew it.

The flag was folded with the greatest care, the natives watching each move with intense interest,

and was then wrapped in cloth, as though it was the most valuable treasure in the world.

"We want them to feel that it is something they must love and protect. It is safe to say, that after this exhibition, everyone of the warriors would have fought to the death to preserve that emblem of power, like the Israelites of old, who regarded the Ark of the Covenant as their fortress and strength."

The last night at the Cataract was a sad one for the boys. For a year and a half it had been their home. They had built every part of it. Each portion had some delicious memory connected with it, and all must now be left to the ravishes of time. Only the water wheel would be left.

It hardly seems possible that the accumulations at the Cataract would make over one hundred packages, aside from the contents of the wagon. When the entire stock of material was arranged the next morning, it was an interesting sight.

The two wagons were driven out from the yard, Harry and Tom in charge of one, and George and Ralph of the other team. Twenty-five light loads had been made for the advance warriors, so that in case of scouting work, one could take the loads of two, and thus leave at least a dozen free for that duty when required.

A quantity of lumber had been cut over six months before, and this was well dried, and would be very valuable to them in beginning operations, and the loads on the wagons were so great that but little of it could be taken in that way. Uraso

saw the utility of the material and insisted that it should all be taken.

Besides the packages thus arranged the most expert of the warriors carried the thirty-two guns, and they had been instructed in their use. Each also carried a bow and set of arrows, and some of them were provided with spears.

During the preceding day no message had come from Blakely, but he knew that the party would leave the Cataract on this day, and they felt no apprehension on his account.

One of the runners from John reached the Professor on the day the train left the Cataract. While the latter tried to prevent the knowledge of his occupation of the Kurabus village from reaching the ears of the warriors, the scouts sent out by the Professor intercepted and tried to capture the messengers which were sent to inform the allies, but failed in their efforts.

When John and his party left, Blakely had drawn the allies to a point within eight miles of the Cataract, and with the reinforcements, headed by Muro, he made a stand. During the night, after a consultation with Muro, the latter, with fifty of his warriors, made a wide detour to the north, and swung around to the west, thus taking a position behind the allies, and this was effected without their knowledge, as they believed.

The object of this movement was to protect the Professor, as the force from the Cataract, joined to that of Blakely's, would be ample to drive them forward, and it was desirable to effect a capture

of the allies, and thus at one operation place them in their power.

Unfortunately, the messengers from the Kurabus' village reached the allies before Muro started on his trip. The effect on the allies was startling, and the Kurabus were determined to protect their homes. The latter believed that the object was to destroy the village and carry off the women and children, and it was but natural that they should go to their assistance.

As a result the allies during the night quietly stole to the south, which was in the direction of the Illyas' territory, intending to march thence west, and thus attack the Professor from the south.

Their departure was not discovered until morning had been well advanced, and Muro's runner did not reach Blakely until the train from the Cataract came in sight.

This was most discouraging news, as it meant danger to those left with the Professor.

"There is but one alternative now," said John. "We must make a forced march to the relief of the Professor. Uraso has the matter of controlling the force well in hand, and Blakely, you and I will take all the men excepting the one hundred in charge of the material, and go forward rapidly."

The first news the Professor had of the new situation was gleaned from the messenger which Muro had dispatched the moment the escape of the allies was discovered.

"Has the Professor been notified?" asked Blakely.

"I sent two messengers early this morning," was Muro's response.

"That was a wise thing," remarked John. "You are to be commended for the step. We must make a forced march at once, and you must lead the advance with your best men."

Muro was much gratified at this position of trust, and called up the warriors selected and spoke a few words to them. Without waiting to make any other preparations than to provide a day's provisions, his party sallied forth, and headed straight for the southwest.

The following day, the scouts sent out by the Professor to the southeast, discovered the allies rapidly moving toward the direction of the Kurabus' village, but he knew that he had not a sufficient force to meet them, and he also deemed it wise to permit them to reach their village, so that they might be able to learn for themselves that, while he had their homes in his power, he had not despoiled them.

This was surprising news to the allies. Such a course meant, either that the Professor and the tribes with him, were afraid of them, or, that Blakely's message to them was in reality true.

Muro's column reached the Professor the following day, and before evening John and the main body came up. The allies were still at the Kurabus' village, and without waiting for the wagon and the remaining part of the force to come up, all started on the march for the south.

The scouts reported commotion in the village, but its cause could not be determined. Undoubt-

edly they knew of the presence of the force from the north. Camp was made for the night, and when morning came it was evident that the Kurabus had been deserted by their allies, the Tuolos and the Illyas.

Early in the morning the advance was begun, and before ten o'clock a messenger from the Kurabus was taken, and he was brought before the Professor.

"Why have you been fighting us?" asked the Professor.

"My people thought you were trying to kill us."

"Why do you come to see us now?"

"Because my chief has been deserted by the Illyas and the Tuolos."

"Does he wish to surrender?"

"Yes; if the White Chief will not punish him and his people."

"Have any of your warriors gone with the two tribes?"

"No."

"You may tell your chief that we do not want war, but peace and friendship, and that we will not injure him or his people and that if we desired bloodshed we would have killed the warriors we took three days ago, and also would have destroyed your villages and taken your women and children captive."

The messenger was conducted to the front, and within two hours he returned with the message that the terms were accepted.

"Then tell your chief that all his weapons must

be brought to this place within two hours, and he must come here with them, and surrender to us in person."

Within the stipulated time, the Kurabus, with their chief, appeared in their front, and Muro, with his warriors, went out to receive them. It must be understood that Muro's tribe, the Saboros, lived in the territory adjoining the Kurabus to the southeast, and that for years there had been bitter enmity between the two, but the Professor did not affect to know this.

When the chief, Tastoa, entered the camp, he glanced around at the warriors, but did not exhibit apparent alarm. He marched direct to the Professor, with arms folded, and showed a dignified attitude, notwithstanding his humiliation. His mien plainly showed that he surrendered to the White Chief, and not to his late allies or enemies.

In explanation of this, it should be said, that in a previous expedition against the Professor the Kurabus and the Saboros had been allied, and on the way, while they were surrounding the party of whites, had a disagreement which resulted in a separation and enmity.

"I have come to surrender to the White Chief. The Tuolo and the Illyas would not agree with me that you meant no harm, and that you would do as you said, and have left me."

"Then you have surrendered only because your allies left you?"

"No; but because we believed you did not want revenge."

"What made you think so?"

"When we saw that you did not destroy our villages, and did not take our women and children, when you could have done so, we believed you. We believe the Great White Chief, but we do not believe the different tribes."

"Then I cannot accept your surrender. You may take all your weapons and return to your village, and if you choose to do so, join your late allies. We will not make a movement against you until you have done so. You must believe Suros and Uraso, and Oma and Muro, as well as myself."

He cast a curious glance about him, as the Professor spoke. This was a new species of warfare. What! allow him to return and continue the war, after he was in their power? The savage mind could not comprehend its meaning.

"Why does the White Chief offer me such terms? I am in his power."

"Because the white man does not believe in taking advantage of an enemy who has entrusted himself in his hands. As long as he is here he will not permit it, and the chiefs who are with me will not ask me to do it."

"I do not understand this. Does Suros say so?"

"The White Chief says the truth. He brings us a message from the Great Spirit. That message is different from the ones we learned. He has told me why our message is wrong, and my people will never again attack another people."

This declaration bewildered Tastoa. He had heard the words of the wise Suros. But Oma

arose and said: "I have been your enemy and you have been ours. The White Chief has been good to us, and I could not understand why. He has told us new things, and how we may live in happiness, and we believe him. When we took your warriors and captured your villages three days ago, he ordered that no one should be hurt, and he has given the warriors the best of food, and treated them as he treated his own warriors. We will follow his ways."

Muro's eyes glistened as he arose to speak. "I and my people love the Great White Chief. I have come from their village, and all they have in the village is now coming to all of our people, and we are to learn the new way of living. From the time the White Chief rescued me from you, he has said to us, 'Do not kill; do not kill; but you have a right to defend yourselves.' They have made the weapons which talk with fire, and there are so many of them that they could quickly kill all of your people, if he would permit it. Now we are going to live like the White Chief tells us."

"Then, if the White Chief tells me I must believe the Chiefs I will do so."

"There is another thing which you must do. The Illyas have some of the white people in captivity. You must send a messenger and say that if they injure the captives I will visit them and destroy them and their villages, and that they must at once return to us, and if they do not, we will go there and take them by force."

"It shall be done."

"Muro, you may restore the weapons to the Kurabus."

While the foregoing proceedings caused the utmost wonder in all of its phases, the restoration of the arms was one which so completely astonished them that the Chief could hardly speak. He finally approached the Professor, and grasping him by the hand, said:

"I have never heard of such things before."

"You must have your weapons, because your people must have food. Go to your villages now, and take with you the warriors we took three days ago. We have given them back their weapons, as you see."

Ralsea, Oma and Suros then pressed forward, and held out the hands of friendship to him. He then turned to the Professor and said: "I do not see Uraso."

"No; he is with the people who are coming from our village, but he will be the first one to go to you and tell you what the others have said."

The first act of Tastoa was to select the fleetest runner, to attempt overtaking the Illyas, in order to deliver the message which the Professor had instructed him to communicate.

CHAPTER V

THE NEW TOWN SITE. THE WATER WHEEL AND THE SAWMILL

The Professor and his party immediately left for the Brabos' village, and before noon of the next day, Uraso, with the wagons and package train, came in sight. The warriors, together with the chiefs, and the two boys, Jim and Will, rushed to meet them, leaving the Professor and Chief Suros almost deserted. They smiled at the eagerness of all. They were just like boys.

When the procession from the village came up they surrounded the wagon and Uraso's warriors, and took the packages from the carriers, bearing them in triumph to the village, and passed before the Professor and Suros. The boys began the dancing, and the warriors took up the suggestion, and improved on it. The hilarity knew no bounds.

Uraso was the first to tell the warriors who were with him of the surrender of the Kurabus. This acted like a stimulant to the assembly.

Later in the day, when peace and order had been restored, the Professor addressed them as follows: "Suros and I have enjoyed the dance and the joys you have had as much as you who have taken part in it. We are both so happy to know that you have become brothers. When we leave this village the Brabos will know that they

are safe from all harm, and that their enemy is our enemy, and that if anyone in either of the tribes is injured it is the duty of all the tribes to come to his aid.

"You must also know that everyone has a right to his own property. If I should take anything from one of you I ought to be punished. Everyone should be made to know this. If a Saboro takes anything from an Osaga without his consent, the Saboros should be the first to punish him, and if they do not then the other tribes should punish him.

"We are bringing all the tools from our village, so that we can teach you how to make many wonderful things. We must find a suitable place to put up the machinery. Each tribe will send some of their people there to learn, and then the same things will be put up in your own lands. Tomorrow we will go south to establish this place."

There was one thing which was a source of grief to the boys, and that was the herd of yaks, which had been left behind. John spoke to Uraso about it, and Sutoto, who always considered the boys first, suggested that he and Muro would take two dozen of the warriors and bring the herd back.

The boys would have enjoyed this outing with him, but the necessity of utilizing their services in the erection of the workshop and installing the machinery, was too urgent to permit it. The boys made it a condition, however, that Sutoto should be with them in the active work, as soon as he returned.

The Brabos regretted the leave-taking, but were delighted to learn from the Professor that he expected them to contribute a number of their men to accompany the expedition.

They passed through the Kurabus' village the next day, and the Professor called the Chief to him. "We want some of your men to accompany us, because we want to teach them the same as the other tribes."

This announcement was a most gratifying one, and he answered: "The White Chief has made us give him our hearts. My brother and my son will go with you."

Could anything have been more expressive of the intention of the Kurabus Chief? The lad was about the same age as the boys, and they led him out to the wagon, and showed him the wonderful things, and then began the efforts to find words to express their meaning, and enable them to understand each other.

It was an amusing thing to see the struggles of Blakely, who was whipping the warriors into a fighting force. Whenever Blakely was around the warriors would give him the military salute, as though they had been trained up to it all their lives.

"I have often wondered where the military salute of raising the hand up to the eyebrows comes from," said Ralph.

"Its origin dates from the commencement of the English army. During the tournaments of the Middle Ages, after the 'Queen of Beauty' was enthroned, the knights, who were to take part

in the sports of the day, marched past the dais upon which she sat, and, as they passed, shielded their eyes from the rays of her beauty. Thus the habit continued, only in a modified form, to this day."

Uraso had charge of the advance, and when they halted that day it was under the spreading

Fig. 5. The Banyan Tree.

shade of a tree that was a marvel to the boys, although Blakely said there were plenty of them in the southern part of the island.

This was a tree, with a large central trunk, the branches of which spread out in all directions, to distances which were fully fifty feet on each side, and at irregular intervals were straight stems which shot down straight to the earth, the lower

ends of which took root and thus served as supports for the long branches.

The boys went around, examining it from all sides. "What is it?" asked the boys.

"It is the banyan tree," answered John. "This is not the only kind which exhibits this peculiarity. What is called the screw pine also sends down shoots in the same way."

"Well, does each of these vertical stems become a tree of itself?"

"In the case of the mangrove these aerials, as they are called, carry up the sap, and form leaves at their upper ends, long after the main trunk dies."

"Do you mean that these drooping branches carry up the sap in the opposite direction, after they take root?"

"Yes; but that is not so remarkable, when it is understood that the buds of all trees are, in a measure, roots, and perform the same functions as roots. The plum tree, and many others, will form roots out of the buds, if the latter are buried in the earth."

"I have heard about the orchids, as I believe they are called. Do they act in the same way?"

"Not altogether; there are certain plants which live on other plants and get sustenance from them, just as some insects attach themselves to animals and live on them."

"There is one thing I could never understand," remarked Tom, "and that is, why the sap of the trees goes upwardly."

"I shall try and answer that question by ask-

ing another. If you put the end of a piece of blotting paper in water, what causes the water to travel along to the other end?"

"That is just as much a mystery," he replied.

"But as you know that to be so, because you can see the process, it will enable me to explain the principle of the movement of the sap. A wick in a lamp becomes saturated and the oil travels upwardly as long as the upper end is burning; but as soon as the light is put out the oil ceases to creep toward the burned end."

"But in the case of a tree there is nothing to do that same thing."

"That is what the sun does. It shines on the leaf, and absorbs the sap, or portions of it, and the sap tries to move upwardly to again moisten the dried pores of the wood."

"I always thought the sap moved upwardly, because the tree was alive."

"The blotting paper and the wick are not alive, are they? Still, you see the same process going on. This is due to what is termed capillary attraction. Suppose you take two tubes, one larger than the other, each open at both ends, and stand them in water. The water will rise in the tubes above the surface of the water outside, and the height it rises depends on the inside diameters of the tubes. The smaller the bore the higher will the water go up. So with the pores in the wood. They are very small, and thus the water moves to the greatest heights."

It was now a question of the greatest importance to set up their home at the most desirable

point. The Chiefs, together with John and Blakely, had numerous conferences with the Professor, on this subject. Many things had to be taken into consideration.

First: It should be located at a point convenient to all the tribes.

Second: It should be on or near the seacoast.

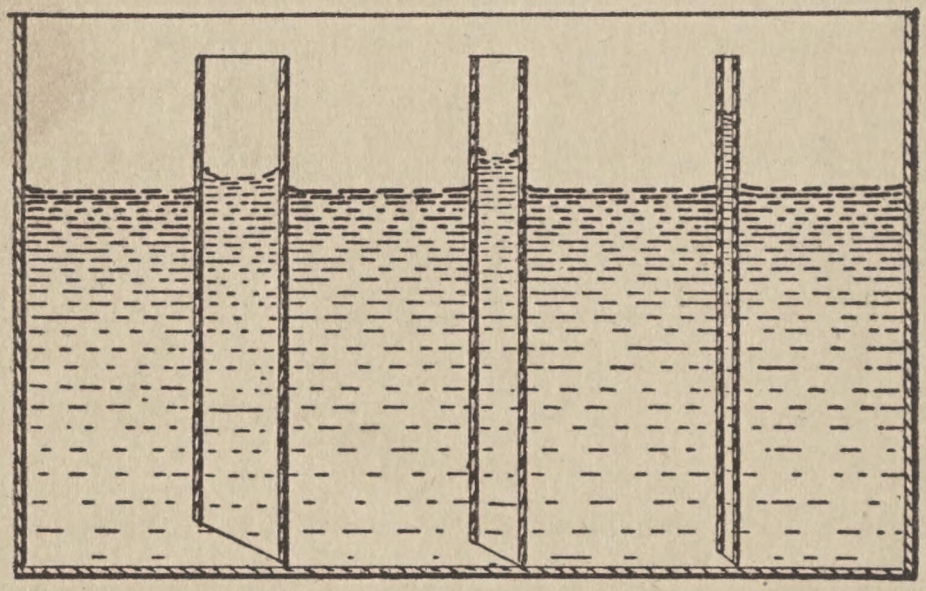


Fig. 6. Showing Capillary Attraction.

Third: Everything else being equal, the most desirable place would be in a section which had the richest soil.

These considerations were suggested to the Chiefs, and all agreed that the river separating the land of the Osagas and the Berees would be most suitable.

"I know a place," said Uraso, "where there is a running water like you have at the Cataract, and it is a little river that flows into the big river."

"Does the water go down steep as we had it?"

"Yes," answered Uraso.

"Let us go there at once," responded the Professor.

Within two days the spot was reached, and at the sight of it all were pleased beyond measure.

"It is an ideal spot," exclaimed John. "The falls would be much better for our purpose than the Cataract, and it is close to the river. As the latter has ample depth for good-sized boats, and the sea is not more than three miles away, I judge, we are near enough to carry out the purpose of building the large vessel."

No conferences were required to make the decision. "Your judgment is to be commended," said the Professor to Uraso. "I do not think there is a better spot on the island."

"It suits me," said Blakely. "See the forest to the northwest? That is where I used to live. I know the boys will enjoy exploring it, and if they want excitement at any time, it is near enough to give them plenty of exercise."

The boys' eyes glistened with excitement at the news. "Won't we have fun over there, when we are fixed up!" said Will.

The Professor, addressing the Chiefs, said: "We do not need all the men we have here, as they will no doubt be needed for a time at their homes, in order to take care of the women and children. For the present I suggest that one-half of them be sent home, and the others remain here, and get the work started. This will take several moons, and we must then meet, unless we

hear from the Illyas sooner, and march against them."

The chiefs selected the ones which were to remain, and those instructed to return home were advised that later on they would be brought to the new village, to take their part in the work, and thus give an opportunity to all.

The greatest enthusiasm prevailed, and each tribe tried to outdo the other in generous acts. The example set by the Professor was, indeed, a lesson to these poor, ignorant creatures.

"Professor, what shall we do when the herd arrives? I think we had better fence in a field for them until they get used to the people and learn to remain in this part of the country."

"I am glad that you suggested that, Ralph. You may build a fence to hold them, and I suggest that you use the space in the forks of the river."

"How many men shall I take for the purpose?"

"As Sutoto will likely be here to-morrow, or on the following day, you should take enough to do it quickly. Use at least fifty of them. Stut would be the one to call in for help."

"What kind of a fence shall we build?"

"I will make a sketch of the best form for the present. Have some of the men cut posts that have several forks like the sketch shows. Cut these off at lengths so that one fork will be about two feet up out of the ground, and the other five feet or a little more above. Set others to work cutting the long poles, which you will find along the river bank."

"How long should we make the poles?"

"Get them as long as you can; but make them, say, nine, eighteen or twenty-seven feet long. Then, at the same time, others can be digging the post holes, and make those eight feet apart and two feet deep. When the posts are set, the men with the poles can go along and lay them in place, just as I show."

The warriors took the bolos and sallied down to the stream. Ralph had made a mental calcu-

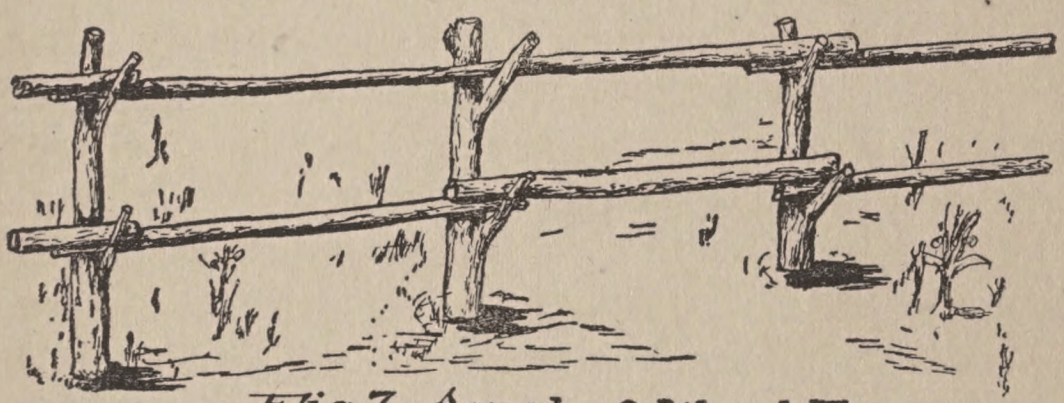


Fig. 7. Sample of Island Fence.

lation that at least one hundred posts would be required; the line of the fence was laid out and the holes marked. Muro took charge of the digging of the holes, and the men showed a wonderful aptitude for the work. During the afternoon the Professor wandered down to the line, and went among them, speaking words of cheer and commendation to all, so that he impressed his wonderful personality on every man.

Meanwhile Harry, with the other boys, was at work preparing a new water wheel. In this he had the aid of Uraso, as the director general of the men. Many hands make light work. In a

single day the wheel was ready for mounting. The dried lumber which had been brought over was a great advantage in making it, and in preparing the bridge below the falls on which the wheel was mounted.

This was completed on the evening of the second day, just as Sutoto came into view with the cattle. It was an amusing sight to see how they had brought over the herd.

Apollo was the name of the bull which had the terrific fight with the old bull. The first thing Sutoto did was to catch Apollo, and firmly secure him with hobbles. He was led in front, and the others driven along after him, the rest following meekly.

When Apollo was finally loosened, and allowed the freedom of the corral, he gave a roar, pawed up the ground and shook his head at the indignant treatment.

Their appearance meant milk and butter. There were thirty-five in the herd, of which ten were young animals, from four to six months of age, and six calves, the latter of which retarded the movement of the drove on the route.

Early in the morning the wheel was put up, and it began to turn, to the delight of the men.

"It would be better, Harry, to set up the sawmill at once, as I have directed a number of men to go to the forest with John, to cut the logs, and they will take the two teams along, so that by the time you are ready, the material will be here for you."

"What shall I cut first?"

"Get out the scantlings for the house and shop, as the latter will be the first to receive our attention. We must have some place to put the things we have in the wagons."

It is remarkable how quickly a set of men, working under intelligent directions, can carry out a purpose. The logs began coming in shortly after noon, and in the morning the saw was at work, and it did not cease its operations for many a day.

The natives were so fascinated with it that they considered it a grief to leave it. But the Professor had other purposes in view. George and Tom were selected to make several looms, similar to the one brought from the Cataract. In this work, as in everything else, some particular ones were selected and instructed to do the work.

Ramie fiber was found in abundance, along the streams, and after a set of men had been instructed how to cut and gather it, they were kept at that work, while others were directed how to wet it down and rot the woody fiber and taught the manner in which the fiber was freed of the stalks.

CHAPTER VI

BUILDING UP THE NEW TOWN

WITHIN a week most disquieting rumors reached the new village as to the attitude of the Illyas and Tuolos. The former sent an insulting message that if the White Chief wanted the captives he should come for them.

The Tuolos had returned to their country, but John was determined that they must have a visit. Thus far no bands from the warring tribes had molested either the Saboros, who were nearest on one side, or the Brabos on the other side.

Their silence after a peace message was sent them could only be interpreted to mean one thing, on the part of the Tuolos.

"The Illyas will not dare to injure the captives they have with such a warning as we gave them, and if they intended to destroy them it is possible that has been done already. Under the circumstances a little patience on our part may show them that we mean business."

Muro, who understood the Illyas' character better than the others, was of the opinion that the Professor's views were most likely to accomplish the purpose without bloodshed. On the other hand, he was of an entirely different opinion with respect to the Tuolos.

A few weeks of active work, first, in completing all preparations for defense, and second, in organ-

izing the tribes into a working unity, would be of the greatest importance to the community.

The shop and the laboratory were completed, and most of the things in the wagons were now in place. The important thing was the disposition of the treasure. For the safe keeping of this a large pit was dug beneath one end of the shop, and an underground vault constructed, the brick for this purpose being made from a natural silicate found in the hills near by, and which hardened without burning. The interior was also plastered with the same material, and a strong door, small, but thick, was constructed to close the opening.

During the night John, the Professor and Blakely, with the boys, carefully stored the treasure there, so that the different tribes had no idea of the use to which the vault had been put.

Two of the simple looms had been made, so that there were now three ready to turn out goods, and the fiber was in such shape that it could soon be utilized. In the meantime the boys concluded that as the weaving process was the slowest operation it would be well to construct several additional looms, and two of them capable of making goods four feet wide.

One of the first acts of the Professor was to scour the hills to the north for minerals. He was in search of copper, and taking a half dozen of the natives with him, and one of the teams, a load of copper ore was brought in.

The furnaces and smelters had been set up by the boys, previous to this, and within ten days

a hundred pounds of copper were run into clay receptacles, to be used for the various purposes.

"What do you suppose the Professor wants with so much copper?" asked Ralph.

"You can make up your mind he has some scheme or other," answered George.

The Professor really did have a scheme, for the first thing he consulted Harry about was a plan to make some small molds in two parts, out

Fig. 8.

THE ONE-CENT COIN

of brass, from a plaster paris disk which he had carved out.

"What is that for?" asked Harry, laughing.

"That is to make one of the first coins from our mint," he answered, smiling.

A sample of the coin is shown.

"What is the hole in the middle for?"

"So they can be strung on a cord, and thus provide a means for keeping them."

"That is the first time I ever heard of that plan."

"It is not anything new. The Chinese adopted the plan years ago, and Belgium is a country which has followed the idea. It has been found

very convenient for shoppers, as they can string them on vertical pieces of wire, and in that way they are always kept in columns before them, and can be readily taken off in making change."

In making the molds, the molten brass was first poured around the paris plaster disk, so that the metal was level with the top of the disk, and, after it was thoroughly cooled, an additional amount of metal was poured over this, so that the two parts would separate. The disk was then taken out, and two holes made on opposite sides

Fig. 9.

THE FIVE-CENT COIN

through the top. The copper was then poured in one hole until it appeared at the other hole. In this way the print formed by the disk was cast in the coin.

Harry made a half dozen of these molds, and the mint was ready for operation. Tom and one of the natives set to work making the coins, and the first day cast two hundred of them. Within a week they became quite expert at the business, and when they took stock at the end of the week over twenty-five hundred of the coins were in the treasury.

A large-sized coin was turned out, which is also shown, the smaller being for one cent, and the larger five cents. The stock of coins within ten days amounted to fifty dollars in value, but it was a good beginning.

During the evening the coins were shown around and admired, and John said: "We have plenty of silver, when the time comes, which can be worked up in the same way."

This idea had not occurred to the boys. "But how," asked Will, "shall we use these? The natives won't give anything for them?"

"That is what we are trying to teach them. They are of no value except as a medium of exchange. Money is of no value, except as it enables us to buy something with it. When you have a five-cent piece and a taro root before you, and are hungry, which will you take?"

"The taro root, of course."

"So it isn't the coin itself, but only its value in what you want. It is want that gives money any value."

"But I still don't see how we are going to make the natives want the coins."

"We do not intend to make them want them. But we may soon have some things they will need. Now it is immaterial whether they give money for it, or if they furnish us something we wish in exchange."

"Then of what use is it to have the coins?"

"Simply because we must have something to measure by. If you buy a yard of cloth you must have a yardstick. If you want a certain quan-

tity of grain you must have a quart or a bushel measure. Now that yard or bushel, each, is worth so much, and they are measured by a coin or coins, of which both know the value."

"I understand now. You are simply trading a certain marked coin for a bushel of grain, instead of giving something else for it."

"Exactly; money in itself has no value. You cannot eat it, or make it serve as an article of clothing, or drink it. You can only measure the needed things with it."

The practical operation of the use of coins as money had its first trial on the following day, when the Professor had two hundred cords prepared, on which were strung five one-cent coins and a five-cent coin.

The warriors were told to file along the wagon, and George handed out one of the coin sets to each as he passed. They looked at the bright disks curiously, at first, and were informed that they were being rewarded for the work they had done. This was a singular way of requiting them for their services. They had obtained food in plenty, and therefore this way their pay; but now, in addition, they were being rewarded.

Uraso explained the new proceeding. They had conspicuously displayed the ramie cloth, made in different colors, which had been woven during the past two weeks. Not a word was said about that. The goods displayed seemed to be of more value than the coins. It was something they could wear, and they envied the manner in which the white people clothed themselves.

John went up to Jim, who had the fiber cloth in charge, and asked him for a piece, indicating the length of the yardstick, which he held, and when he was told that it was worth one of the small coins, John made a great show of taking one of the coins from the cord and paying for the goods which Jim cut off.

Tom did likewise, and this was very soon repeated, some taking two yards or more. The natives regarded this as a new species of barter, and it did not take them long to see the peculiar features of the transaction. Before night fully half of the coins were again back in the hands of the treasurer.

The next day the boys, at the instigation of the Professor, began a species of trade with the natives, purchasing some trinket or other article, for which coins were offered in exchange. This spirit began to take possession of the natives. Regularly each week the pay for work performed was given, and as the weaving of cloth went on, the sale of the goods began to increase.

Soon the Professor called the chiefs, and said: "We ought to send some of these men to their homes, each week, and bring others here, so that all may have an opportunity to work and to learn, and also be able to buy the goods we make."

There was a twofold purpose in this: The warriors would, he knew, take their purchases home, and thus give their families the benefits of the cloth, and it would incite a desire for them to again return and work for the purpose of acquiring more goods.

This was the first object lesson. In the following week, the second one was quietly brought to their attention. The workers had been fed from the common table. It was desirable to stimulate individual effort.

For this purpose the Professor, John and Blakely, as well as the boys, went to the different workers, and made bargains; some offered a coin for the bringing in of a brace of fowl; others for a certain amount of vegetables; and some for particular quantities of fruit and for barley.

The sawmill was turning out a certain amount of lumber, and the main house was erected, and then began the building of a number of small two- and three-room dwellings, all put up cheaply, but in a substantial manner.

This proceeding was looked on with wonder by the warriors. Before long the women and children of some of the workers appeared, and their coming pleased the Professor immensely.

It was evident that the two warring tribes were in communication with each other, and as the affairs of the little colony were moving along in a very satisfactory way, it was determined to bring them to terms. This was brought about by two incidents, which will be related.

The Brabo territory extended the farthest north of any of the inhabited lands, and adjoined the portion occupied by the Tuolos.

In a previous book the history of John was related, in which he described an immense cave, near their village, occupied by the medicine men of their tribe, and where he took refuge when pur-

sued. There he discovered a large amount of treasure. He and the boys had long wanted to go there.

When the report was brought to the new village that the Tuolos had made a foray into the Brabo territory, and killed several warriors, carrying some of the women into captivity, it was a warning that could not be disregarded.

Immediately, on the heels of this news, was the report of two runners from the Saboros that depredations had been committed by the Illyas.

The Professor called John, Blakely and the chiefs Oma of the Brabos and Muro of the Saboros into consultation.

"We are now in condition," he said, "where we must undertake to call those tribes to account. The outrages reported are probably only the forerunners of others which may be much more serious, and I want your views on the course to follow."

"It is fortunate," answered Blakely, "that the tribes referred to are separated by the sections of the island inhabited by our allies. This gives us an opportunity to treat with each separately. It seems to me that we should attack the Illyas first, as they are the most powerful of the two."

"I do not altogether agree with you," responded John. "My view is that we should proceed against the Tuolos, as they have committed the most serious offense, in killing the Brabos."

"You speak wisely," said Muro. "The Brabos are not as well protected as my people."

This observation, coming from Muro, was a most

pleasing one to John and the Professor, and Blakely was instructed to muster a force of two hundred. Notices were sent to all the allied tribes, and within a week they arrived, all eager to engage in the expedition.

"While engaged in that work the business must not cease here," observed the Professor. "It will be your duty, Blakely, to thoroughly drill the men, and instruct them in the uses of the weapons. For reasons which you will understand, John will accompany the expedition."

During all this time there was not a day but the Professor, as well as George, Ralph and Jim, whenever opportunity offered, scouted about in various directions, and brought in new specimens of woods, flowers, vegetables, and samples of ores.

The Professor's eyes were gladdened many times at the odd parcels left on his table, that excited the curiosity of the boys. Jim was an indefatigable gatherer of vegetable products, and one thing which attracted him immensely was the branch of a tree which bore a number of star-leaved clusters, each leaf being feather-veined, and the stems carried numerous yellowish purple-spotted flowers, and also nuts about the size of pigeon eggs.

"Down near the large river the banks are full of these. Can we make any use of them?" asked Jim.

"Why that is a variety of Chica," he answered.

"What is Chica, anyhow?"

"The seeds are good for making burning oil. The inner bark furnishes a fiber which resists all

moisture; and the nuts possess a substance which is well known all over the world as mucilage. It is recognized in commerce as gum tragacanth."

"I saw different kinds there. Are they all useful?"

"Some species contain nuts which are very fine, but are never eaten raw. They must be roasted."

Fig. 10. Chica. The Gum Plant.

"When Jim and I were down there this morning we saw at least a dozen different kinds of plants growing together in a space not three feet square. We both wondered why each kept on growing in its own way, from the same kind of soil. Now, don't the plants get all they are made of from the same soil? And if that is so, why don't they grow to be the same things?"

"Of course, like the animal kingdom, the germ

of each is different, but each takes the identical substances from the same soil, and converts them into entirely different products. One will make a gum; the other produces a kind of milk; others will turn out a hard substance, like the outer portion of the nut; some will make a vegetable good to eat; others will yield a poison, and yet all are from the same soil."

"That is what I mean. Even though the plants are different, why is it that one will extract one thing and another something else?"

"It is due to what is called irritability or sensitiveness in plants. One plant is sensitive to the flow of certain juices, and is irritated, so that it is set into activity when different kinds of substances are carried along the pores or deposited in the cells. As a result, this irritation causes the plant to take only certain ones and reject others, and its tissues are thus built up only by such elements as its sensitiveness selects."

The training of the warriors with the new guns was a stirring sight for the boys, who could not help but be present during most of the time during the two days preceding the departure for the country of the Tuolos.

Ralph and Tom begged permission to accompany the party, and this was a natural request, because they had been rescued from this tribe the year before.

It thus happened that the party of warriors, equipped as they had never been before, left the village, with one of the wagons, which was loaded with provisions and ammunition, and the boys took charge of the team.

CHAPTER VII

THE EXPEDITION AGAINST THE TUOLOS

It was decided to go north until they reached the level country, which would afford easy travel, and then move to the west and cross the large river which separated the Brabos from the Tuolos, as it would be better to meet them on the extreme western side of the ridge which they occupied.

"Do you remember, Blakely, what kind of country is to be found directly west of their principal village?" asked John.

"I have been over that entire country," responded Blakely.

"When I recovered, the morning of the wreck, I went inland at once," remarked John, "and I never saw the sea again. When you related your story about seeing a certain tribe offering up victims you must have been on the western side of the village."

"Yes; I came up from the sea."

"Well, you see I came down there directly from the north, and I reached the village on the eastern side, and I saw the sacrifice of the captives at the same time you did, but on the opposite side of the village."

"That is very probable. On the western side the country is high, but not difficult to travel across."

"That is the exact point I am aiming at. I know that all the way down, from the place where

I struck into the interior, it would be almost impassable for the wagon."

This settled the route to be taken, and they moved westwardly, after crossing the river, and before night the boys caught the first glimpse of the broad ocean.

In the morning they put out scouts, which went well in advance of the column, and Muro was in charge of them. His instinct as a trailer was inimitable.

Before evening of the second day the scouts announced the first signs of the Tuolos. The village could be reached within two hours' march, but John advised waiting for the following morning before approaching.

During the early evening, however, Muro returned on a hurried trip from the front. "They are having a great feast at the village, and it appears that they will make sacrifices to-night, or to-morrow, so that we should approach as close as possible, and if we find that is their intention, prevent it."

This news stirred all into activity. The column went forward with the utmost caution, although it was dark, and the wagon had to be guided along with great care.

The movement proceeded until nine o'clock, and during the night march Muro had arranged a constant line of communication with John, through his runners. A festival was in progress, and the two victims were plainly seen by John when he and Muro went through the grass and inspected the village.

The inaction of the whites had entirely disarmed the Tuolos. Indeed, as afterwards learned, they began to think that fear prevented an attack on their village, and no sentinels were posted to warn them of any approaching foe.

While waiting for the return of John and Muro, Ralph and Tom also wandered around the section surrounding the camp. They were in a valley, on both sides of which were ridges running north and south. The moon came out before ten o'clock, and they remembered some of the scenes about them. They had been brought from the south through this identical valley when they were captured by the Tuolos.

They were on the hillside, not five hundred feet from their camp, and were about to descend the hill, when Ralph started back, and grasped Tom's arm.

"What is that dark object directly ahead?"

The dark object was an opening into the hill, but as it was by the side of a projecting rock, it had the appearance of an object. They looked at each other for a moment in silence.

"I wonder if this is another cave, or the one John spoke about?" asked Tom.

"No, that is on the east side of the village. We are below the village. Do you think we had better make an investigation?"

"Yes; but I wish John was here. Come on; we have plenty of help here if we need it."

The opening was approached as noiselessly as possible. It showed a typical cave entrance, through solid rock, or, rather, through what ap-

peared to be a cleavage which had been spread apart. They had no light of any kind, but the discovery was one which interested them, because they knew of the treasure caves existing on the island, and two of them, at least, were within their knowledge, and contained immense hoards.

"Can you strike a match, so we can get some idea of it?" asked Tom.

"I am going to try it at any rate." So saying, the match was lighted, and its beams penetrated the interior. In their eagerness the match was muffled, and went out, but they caught sight of a huge white cross, far beyond, and it seemed to be moving.

"Did you notice that?" asked Tom excitedly.

"Do you mean the cross?"

"Yes."

"It seemed to move up and down."

"I thought so, too."

"I don't care about going any farther without we have some one with us and can have a decent light."

The boys hurried to the camp, and waited for John. When he came they hurriedly related the experience.

"That will do to investigate."

"We saw a cross in there, moving up and down."

"Have we any of the candles with us?" he asked.

"Possibly; I can soon tell."

Tom came back with the news that he had found a box of them.

"As the village is quieting down, we shall have plenty of time to make the examination to-night.

We must wait until Muro returns, so as to get the latest news, and can then start out."

Muro returned shortly after, and together with the boys, went up the hill, and entered the mouth of the cavern. Three candles were lighted. The great cross was before them, but it was such a different thing, now that they were face to face with it. The end of the chamber, which the light penetrated, had four openings to the chambers beyond, two above and two below. These openings were separated from each other, and the white walls between the openings appeared to form the white cross.

It was wonderfully realistic, this fanciful and fantastical carving of nature through the rocky structure.

"But I saw it move; that is sure," said Tom.

"Did you see that move, or was it the light of the match that moved?" asked John. "Imagination plays many a trick, during the excitement of the moment."

John took the light, and by moving it up and down showed how the beams, shining past the glistening walls, would cause the illusion of the cross moving.

The cavern was found to be much broken up as they advanced, and reaching the second set of chambers, it was evident that some one had lately occupied it. Penetrating farther into the interior, they were surprised to see articles of savage clothing, and long reeds, that had been burned at the ends, together with utensils for cooking.

"We have entered one of the homes of the medi-

cine men of the Tuolos. I have no doubt they are now at the village attending the festivals, and we had better leave as quickly as possible."

Before the entrance was reached they heard a great commotion outside, and their own people rushing to and fro, and as they were emerging three fantastically garbed natives met them. John ordered them to halt in the native tongue, and they stood there irresolute. The boys also leveled their guns at them, and they submitted as Muro and his men rushed up.

The appearance of John and the boys startled Muro beyond expression, as the latter said: "These are the medicine men of the tribe."

"I knew it," responded John. "We have just been investigating the place they live," and he pointed to the mouth of the cavern.

These were the men who performed the sacred rites of the Tuolos, and were called the Krishnos, as they learned from Muro.

"Take them to the camp," ordered John.

Without more ado, they were hustled down to the wagon. It seems that when the Krishnos returned from the village they found themselves in the immediate vicinity of the camp, and in the effort to escape aroused the sentries, who rushed upon them.

If they could have reached the cave, not one of the warriors would have dared to enter it, as their superstitious fears would have prevented them, but outside the cave they had no such feelings. It was fortunate, therefore, that John and the boys were there to prevent them from entering.

As they were going down the hill, John exhibited a curious cross. He had found it in the cave, just before he advised the boys to go out. It was made of stone, and one of the limbs had a hole near its end, which indicated that it had been carried as a charm.

"Isn't that singular? Why should the natives have the Christian sign of the cross?"

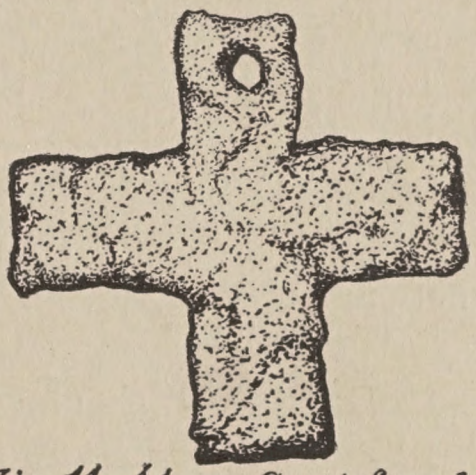


Fig. 11. Stone Cross found in Cave.

"That is one of the earliest symbols that the world knows. Its use goes back beyond the earliest period of history. It was the favorite figure used by the astronomers and astrologers of the ancient Babylonians, fully four or five thousand years ago. The clay tablets and stone monuments of the Persians contained them; the Hittites, in the earliest Jewish times, used them; and the ancient Egyptians decorated the High Priests officiating in the temples with figures of the cross."

"It seems to me that if it was used by peoples in different parts of the earth, there must have been some reason for it."

"One of the well-known forms found in the inscriptions shows the cross within a circle. This seems to be the meaning of the phrase in Isaiah which says the 'four ends of the earth.' In Bible times the earth was known to be round, so that the expression used in the Bible about the 'circle of the earth,' and the four ends, seem to point

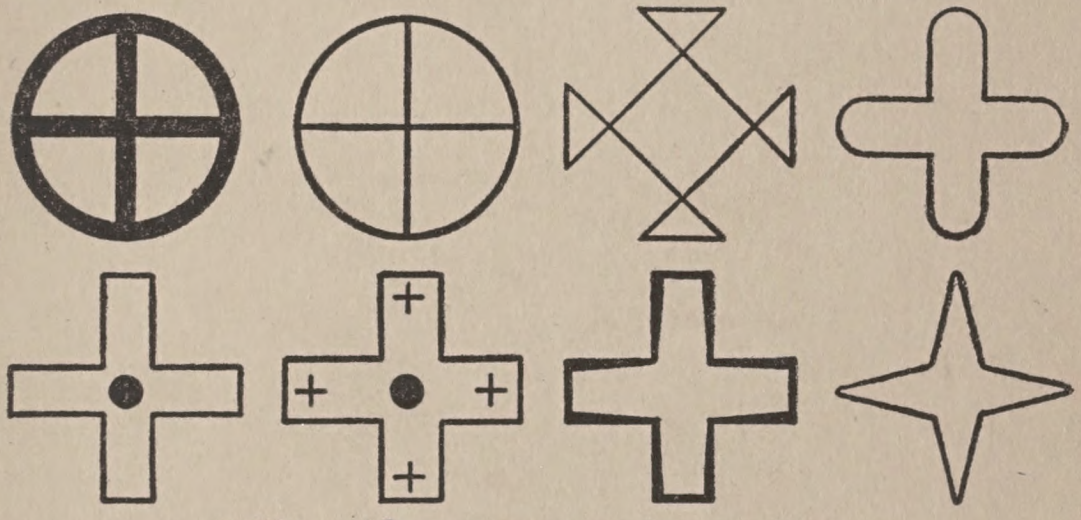


Fig. 12. Ancient Crosses.

clearly to the cross within the circle, to indicate the four points of the compass."

"So the Christians took an old form and made it their symbol?"

"Yes; the Roman cross, used at the crucifixion, had the lower stem longer than the other, and from this fact that form became the Cross of Christianity."

The uproar created by the pursuit attracted the attention of the warriors in the village, who ran to and fro, and soon learned the cause of the disturbance.

The camp was kept quiet, however, but the scouts watched the excitement created, and reported the results at frequent intervals. Muro knew they would not desert the village, as they would not be likely to leave it at the mercy of their enemies, at least without a fight.

John confronted the medicine men as soon as the wagon was reached.

"Why do your people make war, and refuse to treat with us?"

"Because you have no right to come and try to kill us."

"Why did you imprison our people, and offer up some of them as a sacrifice?"

"Because your people fought us."

"You lie; you took those who were defenseless, and had no weapons. You do not tell the truth."

"The Great Spirit told us to kill you."

"Why do you try to lie to me. I do not believe you. The Great Spirit never told you so. He would not speak to you."

"The white man does not know. He speaks to us."

"Where does he speak to you?"

"In the sacred cave."

"How does he tell you?"

"With wonderful signs."

"Tell me some of the wonderful signs."

"He makes a great light, and we read it in the light. He makes a great noise, and we know what he says."

"Does he make a great light and a great noise up there?" and John pointed up to the heavens.

"Yes."

"Then why did you lie to me when you said that he speaks to you in the cave?"

"We can understand it only in the cave."

While they were thus speaking John held the stone cross in his hand, and the Krishnos eyed him curiously. He finally saw the movement, and, quick as a flash, he reached down in his pocket, unobserved by them, and drew forth one of the wooden matches, which they had made at the Cataract.

"What is this?" he asked sternly, pointing to the cross.

They raised their hands and rolled their eyes upwardly, as though about to pronounce a malediction on John. He deftly drew the match along the rear side of the stone, and as it blazed forth into light, he thrust it forward into their faces.

The act was such a startling one that they threw themselves on the ground in terror.

"The Great Spirit told me that you lied, and he is about to come out of the stone and consume you. He will follow you everywhere unless you go to the Tuolos at once and tell them that the Great Spirit has told you to give up the captives, and to never again kill any of them. You must tell them we have been sent to make them our friends, and that if they do not follow this advice we will punish them."

The Krishnos cringed before John. It was obvious to the surrounding warriors that the words they had heard had an ominous import, and they saw how feeble were the devices of the so-called

wise men when pitted against the knowledge of John.

John assumed a most tragic attitude, as he slowly raised his arm and pointed with his finger to the savage village. "Go," he said, "and bring back to me the answer before the morning sun comes up."

They hesitated. "Do you fear to go? Are the wise men cowards? Did the Great Spirit tell you to fear the Tuolos? Shall we go and sacrifice all your people?"

"They will not believe us; they will kill us."

"Then they, too, know you have lied to them. If you remain here you will not be safe, because the great light might destroy you."

Then turning to Muro he said: "Take these men to their village, and see that they are forced to meet their chiefs," and with an imperious air he turned from them.

Muro's warriors were not too gentle with them. The spell of savage witchcraft had been broken. John and all of them knew it. They were hustled forward in the darkness, and as they approached the village Muro told them to advise the chiefs in his presence what John had said.

Muro and the warriors, with the loaded guns, remained at a safe distance, and the Krishnos entered the village. They waited in silence for more than an hour, and then a commotion was noticed, which grew more intense as the voices increased in volume.

In the meantime John with the rest of the warriors came up quietly in the rear, and, after con-

sulting with Blakely and Muro, the village was surrounded.

The boys saw the large hut where they were confined, after being captured, and from which they were rescued. Calling John's attention to it, Ralph said: "That big house is the place they kept us, and that if where you found us."

John looked at them in surprise. He did not know this, as at the time the boys were rescued he was in mental darkness, and did not recall the incident.

It was obvious that some tragedy was being enacted. While awaiting the result of the conference Muro was away instructing the pickets who were around the village. He soon appeared, bringing with him two Tuolos whose dress betokened them as belonging to the same order as the individuals who had been sent into the village.

Calling John aside he said:

"The Tuolos have two rival sets of medicine men. These belong to the other set, and are the ones who perform the religious rites."

"Where did you find them?"

"Directly east of the village."

"Were they going to the village?"

"Yes."

"Did they come from the hill on the east side?"

John mused for a while, and then said quietly to Muro: "They came from a cave on the hill, where they perform their rites, and it is a place I want to see. It is one of the reasons I insisted on coming to settle matters first with the Tuolos."

Muro was astounded at the information, as he

asked: "How do you know there is a cave in the hill?"

"Because I have been in it, and I know what it contains. They are having trouble in the village with the Krishnos we sent there."

"Yes," responded Muro; "and they have sent for the others, as they do not believe what they have told the chiefs."

"I will question the ones you have brought in."

The two captured were brought before John. They stood before him in defiant attitude, and some of the Brabo warriors cringed at their frowning mien.

"Why were you going to the village?" he asked with a severe frown.

At this question they scarcely deigned to move their heads, and were silent. The question was repeated, but they refused to answer. This was carrying out the very line of conduct which Muro had advised John would be the case, and in concert they had mapped out a course of action.

"Tell me, Muro, have any of your people the same fear of these Krishnos as the others possess in the various tribes?"

"It is the universal belief in the various tribes that to offend them means death. The only ones who are supreme are the chiefs, who often imprison them, but even the chiefs dare not kill them."

"Will your people carry out our command if we do not order them killed?"

"My people will do whatever I say, even though it be to kill them. They saw how the other Krish-

nos quaked when you made the fire come out of the stone."

"Then, if they refuse to answer me, I will order them to be beaten. You will understand."

"That will be done with pleasure," he answered.

It was obvious to all that the Krishnos considered themselves immune from the threats of John, as they stood there and seemed to breathe imprecations on the heads of their captors.

CHAPTER VIII

THE SUBMISSION OF THE TUOLOS

The situation was a tense one to the entire party, and John moved forward, placing himself directly in front of them.

"Do you think the Great Spirit can prevent us from punishing you? If you do not answer immediately I will call on him to lay stripes on you. Do you answer?"

He stepped back slowly, and then suddenly spoke out the warning signal that he had arranged with Muro, and instantly six of the most powerful Saboros sprang upon them and bound them together face to face. John stood there with arms folded. He raised a hand, and two of the warriors raised the supple and toughened twigs, and brought them down on their bare backs.

It was all done with such wonderful celerity and precision that it astounded the circle of warriors beyond measure, and the effect was doubly so to the two Krishnos. John had staged this to produce the greatest effect. The Krishnos were bound with their heads side by side, and a cloth put over their heads, so that they had no knowledge who their tormentors were.

They danced about, and in their shrieks called out imprecations on their enemies, but soon, as the blows continued, begged for mercy, and Muro signaled them to cease.

The cloth was removed and John again addressed them. They again persevered in their silence, and at a motion the cloth was again placed over their heads.

Before the second chastisement began they yielded and the cords were released.

"You see the Great Spirit did not come to your assistance. Why were you going to the village?"

"To tell the chiefs not to yield to you."

"The Great Spirit has told me to tell you that the Tuolos must give up their captives, and cease war. Will you tell the chief so?"

"The Great Spirit did not tell you so," they defiantly answered.

At a signal from John the cords were again brought into play, and the cloth exhibited. At this sight they pleaded for mercy, and promised to do as John requested. They were released and conducted to the outer line of pickets, and quickly disappeared within the village.

It was now nearly four in the morning, and the first streaks of light began to show in the east. Muro knew the Tuolo character. They regarded themselves to be the superiors of all the tribes, and hitherto had treated the others with contempt, excepting the Illyas, whom they respected only because they were the most powerful.

"They are having a warm time discussing the situation," remarked John, as he noted the surging inhabitants. That there was indecision became apparent, and the condition of the Krishnos more precarious, as light began to give them a

more decided glimpse of the activities in the village.

Soon warriors were noticed rushing to and from the large circle within which the Krishnos sat. Bows and spears were hurriedly grasped.

"What does it mean?" asked John.

"It is likely they know they are surrounded, and have decided to defend themselves," answered Muro.

A warrior of distinguished appearance emerged from the circle, and advanced toward the position occupied by John. Muro beckoned to John, and together they moved into the open. The warrior saw the two approaching, and he halted.

Turning to his band he spoke a word, and another no less distinguished stepped from the rank and moved toward him.

"The first one is the chief, and the other one he called to follow is the next in rank. As there are two of us, so must there be two on his side."

John and Muro advanced without halting, and as they neared each other the chief, in the most haughty manner, addressed Muro as follows:

"Why do you come to make war on my people?"

Muro, taking his cue from John's previous attitude, rose to his full height and replied: "You have always been the aggressor against the other people, and you have within the last moon killed and taken two Brabos in captivity, and we demand their return."

"That I will not do."

"Then the White Chief will speak to you."

John advanced and began the conversation.

"The white people do not desire war. You captured two of my people and I took them from you with only four men. All the tribes but you and the Illyas have united to compel you to submit, and you shall not again be free to murder and injure other people.

"If you want war, we are prepared to fight you. Your village is surrounded, and we have the fire guns which will compel you to yield. If you will surrender, we will see to it that you and your people shall not be harmed, but if you resist you will be killed. You cannot escape."

The chief was stunned, and could not answer. John saw the impression the address had made, and proceeded: "What did the Krishnos tell you? Did they not tell you to surrender? Did they not tell you that they lied when they said the Great Spirit wanted you to kill us?"

The chief was silent. Was he debating the matter in his mind? John continued: "When this speaks," he said, pointing to his gun, "all of the fire guns about your village will speak."

"How shall we know you will keep your word?"

Muro held up his hand, as he spoke: "Ask the Kurabus whether the White Chief keeps his word."

Before he could reply, John added: "The White Chief keeps his word. He believes the people here will keep their word if they know the others will do so. He has armed the tribes who have allied themselves with him, because he believes in them, and we do not want to make you captives, or offer sacrifices of your brave men."

"The White Chief speaks wisely," said Muro.

"He does not believe in making sacrifices. The Great Spirit has told him that is wrong."

Still the chief pondered, and, slowly raising his head, said: "I believe the white man, and what he says. I will tell my people."

He turned and moved toward the village, John and Muro remaining there, as an indication that they expected an immediate answer.

"He will yield," said Muro, "and according to custom, will first tell his people what his decision is."

Muro was right. Within a half hour the chief advanced at the head of his warriors, the latter of whom had left their bows and spears at the circle, and the two stood ready to receive them.

As the two chiefs appeared the warriors lined up behind them.

"I have brought my warriors here to show you that we will be friends." And John advanced and took the hand of the chief.

"In my country we become friends when we take each other's hands, and I am glad to see that you have wisdom to accept us as your friends."

At a signal from Muro, the warriors advanced from all sides, and together they marched into the village, the different ones telling the Tuolos the wonderful things the White Chief was doing, and how they were bringing all the tribes together, and making them stop war.

The first act of the Tuolo chief was to liberate the two Brabo warriors. When the wagon was driven into the village, the people gathered around the curious contrivance. Some of them remem-

bered it when it was there nearly a year before, but under quite different circumstances.

The boys, Ralph and Tom, soon attracted the attention of the chief. He went up to them, and simulating the act of John, held out his hand. The boys understood it, and respectfully responded and saluted the chief, in regular military fashion.

Then, as a climax to the foregoing events, Blakely gave a word of command to the fifty who were armed with the guns, and for the benefit of their new allies, put them through a manual of arms. The precision with which this was done, and the remarkable manner in which the subsequent evolutions were performed, astonished the Tuolos.

While this was going on there was little time to notice the condition of the Krishnos. They had been bound; and were now lying in disgrace at the place where the circle had been formed, trembling at their fate.

Before preparations had been made for breakfast, the chief gave a command, and a number of warriors rushed up to the poor fellows, and began to drag them to the large hut.

Muro motioned to John, and quietly said: "They will probably torture them."

John appeared before the chief and said: "The Great Spirit will be offended if you injure the Krishnos."

"What would you have me do with them?"

"Give them to me."

The chief ordered them to be brought forward, and spoke to them: "The White Chief has asked

me not to injure you, and at his command I have given you to him."

This announcement seemed to stun them, but Muro was quick to assure them that the White Chief meant no harm.

The boys took complete satisfaction in going over to the large hut, to again witness the place where they had spent two weeks in terror, expecting that each day would be their last.

But we must return to the Professor and the colony. Two days after the departure of John and his force, the second insulting message came from the Illyas, in which the statement was made that they and the Tuolos had united to drive the White Chief from the country and to destroy the tribes who were allied against them.

A messenger was sent after John, but this was not necessary, as the Tuolos were in their power before the messenger came.

The Professor had ordered the building of a number of small houses, each containing two or three rooms, and these were plainly fitted up for comfort. Some of the natives became quite expert at putting up these structures when once directed.

George and Jim were set to work, with a half dozen of the men, at building chairs and tables for the houses, and the work of weaving the cloth goods was not interrupted for a moment. As stated, the women began to drift in, and the Professor welcomed them. When they arrived, many of them with their children, the Professor assigned them and their husbands to these cottages.

This was an intense delight to them. Each cottage had a small patch of ground surrounding it, and the first care was to advise them how to lay off and plant flowers about the place, to make the surroundings attractive.

It must not be thought that the houses were gifts. It was not the purpose to instill the idea that this work was one of charity. Instead each head of a family was made to understand that he must pay for the home, and this was done in as simple a manner as possible, so it would be appreciated and understood.

Individual effort was stimulated on the part of the different workers. As fast as the members of a worker's family arrived, they were installed in houses, and then began a new system of providing for their keep. Hitherto, they had boarded at the expense of the common fund; but now this was gradually changed, and they were informed that each family must provide its own food, and that those who did so would receive a larger number of coins.

This resulted in each one trying to find some new direction in which they could get the coins. It is curious how this new phase of living brought out traits common to humanity everywhere. Some more eager than others, and having less honesty than the common run of natives, sought to get their sustenance by resorting to trickery and thievery.

In their native state this was not considered a crime. It was commendable, unless detected. But by constant talk, on the part of the Professor, and by example, he instilled into the policemen, which

he had installed, the principles of honesty. He awarded those who were vigilant, and the result was that they were most acute to detect the rogues.

The first thief was caught the day after John's party had gone. He was immediately brought before the Professor. The arrest of a thief was such a new proceeding that the workers could not be kept at work, and the Professor suggested that they should all be present at the trial.

The inquiry was conducted with decorum, Harry being appointed to prosecute him, and George to defend the prisoner. George did it vigorously, too, but it was a plain and palpable case, and he was found guilty. This proceeding was another entirely new manner of treating an offender, and the people marveled at the attempt to defend the thief.

The Professor saw the cause of the wonderment, and said: "We do not defend the wrong, but we believe that each man who is charged with a crime should be permitted to defend himself. If he does not know how to properly defend himself, then it is our duty to see that he is protected in all his rights, for he is not a criminal until it is proven."

"He has tried to explain why he took the goods, but you know what he has said was not true, and he must be punished for it. He must work two moons without getting any of the coins, and if he repeats the crime, he must work until he restores the value of the goods taken, so that each one will know that a thief cannot take things from another without paying for it."

The incident for a long time deterred anyone from repeating the offense. It was an object lesson, because it instilled a respect for a law which was fair to all.

Suros, the chief of the Berees, was the most impressed by the scene, and could not express himself too forcibly at the wonderful effect which the principle would have on the tribes in their dealings with each other. He was really an intelligent native, far ahead of the others in his comprehension of the duties of one to the other.

The fact that he was regarded with reverence by all but the Kurabus, and was even respected by them, was a strong factor in determining the Professor to set in motion a form of government which it was hoped would forever terminate all bitterness of feeling between the tribes, and which will be detailed hereafter.

During the day on which the Tuolos submitted, the two chiefs, together with John, Blakely and Muro, were frequently in consultation.

"The Great White Chief, who rules all of us, wishes to see you, and you must bring fifty of your warriors with you to his village," said John. "He will show you how you can be made strong, and your people happy. He will tell you what our purpose is, and what the Great Spirit asks you to do. We will start in the morning."

The chief, to the surprise of all, did not demur at this. That night John called in Blakely, Muro, Ralph and Tom.

"I want you to go with me to the cave on the hill to the east. There are some things which belong

to us. We shall take them, since they are of no use to the people here, and we may be able to put some of the things in such a condition that they will be of value to the people on the island."

The wagon was taken along, and the people wondered at the strange proceedings. Many of them followed, but Muro warned them to remain behind. It was evident to all, however, that they were going to the Krishno cave, and its purport was a mystery to them.

John's sense of direction did not deceive him. He soon found the entrance on the village side, and, lighting the candles, immediately entered the cavern. John led the way, as his experience in its hollows enabled him to point out the direction to be taken.

The interior, lighted up by the candles, was most weird and beautiful. The stalactite hangings were not massive, but showed the most delicate tracings, in the first chamber reached. This was the western wing of the great interior cross which John had previously described.

CHAPTER IX

PLANS FOR THE BENEFIT OF THE NATIVES

Directly beyond this chamber, and on a line with the entrance passage, was an extension which led to the other side of the hill. The chamber formed an immense cross, in its plan section, and the two lateral extremities were the points of interest.

The party first went to the left, and there found the habitation of the Krishnos. Peculiar implements and instruments were discovered, and all of these were taken, and placed together, Muro and the boys looking on in wonder.

Among them were found a number of crude crosses and numerous charms or amulets, the kind that they vended, and which the natives gave their souls and bodies to acquire.

"The possession of these will be of great service to us, as the people reverence them, and we must not expect to change their beliefs in a fortnight."

"You said there was a lot of treasure here," remarked Ralph.

"That is in the other wing of the chamber. As we have everything from this place that is serviceable, we will go to the south wing."

The recessed part of the chamber at this place had the appearance of being carved from the rock, and decorated with the universal calcium. The floor was covered with stalagmites, rough and un-

even, showing that the place had not been trod, perhaps for centuries.

"What are those curious things?" asked Tom, gazing at the square-shaped objects, which were arranged in one corner.

"By opening them we shall see."

"Here is one, partly opened," exclaimed Ralph in great excitement.

"Yes; that is the one I tried to get into," answered John. "Notwithstanding it was a hazardous thing to do at the time, I took the risk. The Krishnos were at that very time at the other wing which we just left."

The receptacle was brought out and examined. The wealth of gold and silver was amazing. Blakely could hardly believe the testimony of his eyes.

"Your ship, the *Adventurer*, is floating around in pieces on the Pacific, but I imagine there is enough here to compensate you for the loss of the vessel," remarked John, as he noticed Blakely's wondering look.

"How can we ever get all this stuff on the wagon?" asked Tom. "The boxes are all falling to pieces."

"The Krishnos have plenty of copper vessels, as well as others, which they have gathered up from the wrecks on the coast. You know the best of everything goes to them, and the chiefs are not strong enough really to prevent them on account of the superstitious fears they inculcate."

True enough, the eastern wing had a hoard of vessels, some of them of the greatest value, which were arranged about the chests of treasure, and

the work of filling the receptacles was industriously undertaken. This occupied them for fully three hours, and the greater task of carrying them to the wagon was begun.

When they emerged from the cave at four in the morning they were tired beyond all description, but they had a mass of treasure, that did not pale in comparison with the amount taken out of the caverns near the Cataract.

In the morning the Tuolos were selected, and the chief invited to enter the wagon. John went to the large hut, and released the Krishnos. They were unbound, and directed to follow the marching column, surprised at being free from the captive bonds. They could not understand such treatment, and this was heightened when John ordered the aged Krishno, who walked with difficulty, to take a place in the wagon.

The natives saw the warriors and their chief depart, not as prisoners, since all had their weapons, but conducted in state, if the appearance of the chief in the vehicle was an indication of the proceeding.

Two days thereafter the cavalcade approached the village, and the chief strained his eyes, as he peered at the multitude about him, and saw a village of a most remarkable character, where two moons before was a virgin tract of land.

The venerable appearance of the Professor attracted him. He was startled at the sight of Suros, and then, glancing about, he recognized Oma of the Brabos, Uraso of the Osagas, and lastly, Tastoa, chief of the Kurabus, lately his ally.

The Professor welcomed him with outstretched hand. "You are wondering at the sight of your late enemies, and of your friends. We have nothing but friends here. They can tell you that we welcome you as a friend, and will explain why we do so. We will show you what the people are doing for themselves, and how happily they live, and the White Chief brought you here so that you might see these things for yourself."

"We welcome you, Marmo, as one of our friends," said Suros. "I tried many moons ago to tell you that the Great Spirit did not want us to kill each other, but the wise men told you differently. We do not believe them any more, but listen to the White Chief."

"He has told us the most wonderful things, and taught us how the white men live, and how different tribes live together in peace."

After the welcoming functions and the explanations were concluded, he was taken to the different works, and everything explained to him. He saw the water wheel, and how it turned the sawmill and the grindstone and lathes, and the mill for making the flour.

The looms interested him the most of all. It is singular how the various tools and machinery affected the different ones, and this was particularly observed by the boys.

"I have watched the several tribes," said Harry, as they first looked about them at the strange things, and it is curious how the different things impress them. I have noticed that the Osagas are particularly interested in machinery. The Saboros

like anything connected with the soil, and they would make good agriculturists."

"Don't you remember when Uraso came to the Cataract he never took any stock in the guns, but Stut couldn't keep his hands off them?" responded Tom.

"The old chief Marmo thought the loom was the finest thing in the whole lot. He is over there now, and has been watching it for the last two hours."

For two days the chief wandered around, paying no attention to anything but the machinery, and the products turned out. The coins were a novelty, and a string was presented to him. He noticed the friendly attitude of all the warriors to his men, and marveled at the change.

He could not understand why the men would work for the coins, and then give them up for something else. The Professor tried to explain this, and it must be confessed that it was a hard thing to do. It seemed that nothing but a practical application would make it plain.

The Tuolo chief was a ready listener now, and was unusually quick to grasp a situation, although he could not learn the ethics of the white man. The Professor had him present at one of the trials for theft of a petty nature, which occurred a few days after his arrival.

He was surprised to find that any notice should be taken of such a trivial affair. The Professor, commenting on it at the trial, which he did particularly for the benefit of Marmo, said: "It is not the amount of the theft, but the act itself, which we

must condemn. If you could have taken a larger amount you would have done so, and you must learn that the property you took did not belong to you but the some one else, and that is just as much a crime as though you took all the man possessed."

That was sufficient for his first lesson in justice. "But," he asked of the Professor, "can all men be guilty of doing wrong?"

"Can you do wrong?"

"Yes."

"But you are a Great Chief, and how can you do wrong in taking things from your people?"

"Because the people own the things, just as much as you own the things which you have properly obtained."

"Then if you do wrong, will you be punished?"

"Yes; just the same as the people who do wrong. My punishment should be greater, if I do wrong, because I should set them an example to do right."

"But how can I do wrong if I take anything from my people? I own everything."

"Who gave everything to you? By what right should you or I own everything? Because we are chiefs does not give us the right to own everything."

"Then how can the chiefs ever own anything?"

"They should work for it like everyone else does."

"Do you work like the others do?"

"Yes; I oversee the work of others and try to make them happy, and see that no one is idle and

that the laws are obeyed. For that work I am paid, just as the others are paid for the work they do. I do this work because my people ask me to do so, and they pay me a certain number of coins for the work, the same as the man is paid for the particular work he does."

This doctrine, so entirely new, could not be grasped at once, and he continued with his questionings: "But the people may not want me as their chief, and take some one else, and that would cause trouble, and no one would know who was chief."

"Then it becomes your duty to so conduct yourself that they will not want some one else to be chief. If a man works for me and he does not know or care how he does the work, or is careless, and I cannot depend on him, I get somebody else in his place. Would you keep such a man?"

"No; but I would have the power to send him away."

"Then the wise chief must know that if he acts as a true father to his people they will not try to get another chief."

Blakely had been a man of affairs at home, and was a sharp, shrewd business man. To him the Professor entrusted the arranging of the affairs of the town, impressing on him the importance of directing the natives into a wide and diversified character of enterprises.

The business was one admirably suited to his temperament. He had long ago spoken to the boys and John about the promotion of the island, by the establishments of various industries, and

particularly agricultural pursuits, which would require workmen to cultivate coffee, cocoa, the spices, and the numerous vegetable products which grew in a wild state in great abundance everywhere.

These various articles, if grown systematically, would mean an immense source of wealth, and should afford employment for all the natives, and thus mean their advancement.

The hills were full of mineral. He knew this, and had the testimony of the Professor as to the valuable character of the various ores. Sooner or later communication could now be established with the outer world. All were contemplating the preparation of a suitable vessel which would enable them to return to the United States.

One evening, while the conversation was on this absorbing topic, he remarked: "I don't know how you gentlemen feel about this place, but as for myself I feel that from a business point of view this is the ideal spot. I am just as anxious as you are to see my home again, but the possibilities are so immense here, that, as soon as possible, I shall come back."

"For my part," replied the Professor, "if a ship should appear in the habor to-morrow, I would not for a moment consider leaving these people. The work of their redemption is not even started in such a way as to permit me to safely leave them. The boys may well be pardoned and commended for wanting to go home, but my work is here."

"That expresses my sentiment exactly," said

Harry. "I want to go home, it is true, but what a wonderful experience we have had here, and when I think of the remarkable progress we have made it astonishes me more than I can tell you. If I do go home it will be to come back again, because I want to be where the Professor is. I like this work, and the excitement it affords."

"You won't have any more savages to fight," responded the Professor, "and it might not be so interesting for you."

"Making guns is much more pleasant than using them against people."

George's face was a study. He was the sentimental one of the lot. He was by all odds the most emotional, and the greatest lover of home. But withal that he reechoed the sentiments of Harry. "If I could only see home again, I would be content, and when I came back it would be to know that I could return whenever I wanted to."

All the boys were enthusiastic about the trip home. Many plans were projected, and talked over.

"Won't it create a sensation," remarked Ralph, when it is announced that three of the *Investigator's* lifeboats were wrecked on an island, and that the survivors arrived after an absence of—"

"Yes," broke in Tom. "How long?"

"That will depend on several things," said John. "First, to bring the Illyas to terms, and second, to build a boat big enough to take us safely to the nearest harbor which is in communication with America. As for myself, this life and the

hopes for the future are too alluring for me to even try to get away."

With characteristic energy Blakely consulted Harry and the working force in the shop.

"Do you think we could turn out some plows?" he asked.

Harry smiled. "This establishment is prepared to turn out anything it has orders for."

"Then put down my order for a half dozen plows, to be delivered as quickly as possible."

The new town was located within the territorial limits of the Osagas' country, and it was now necessary to make immediate provision for some sort of laws or regulations with respect to the land. The savage theory was that the chief owned all the land, and this was a condition that well might breed trouble.

Osaga was the chief. He was the first to receive the full understanding of the new doctrine. It was proposed that he should receive as full compensation a certain stipulated sum, and in return make a transfer of all his rights to the State.

"But what is the State," he asked, "and who will he be?"

"The State will mean all of you."

"Then I will own a part of it just the same as everybody else?"

"Yes; let me explain that still further. When your people begin to raise coffee and cocoa, and all the other things which the people in the world will come here for and buy of you, the lands all about you will become very valuable, and many will come here to buy them. The money will go

to the State, which means you and everyone else here."

"Will it be done the same with the Berees, and the Kurabus and the Saboros?"

"Yes; each will be a State of its own, and will be governed in the same way, and a Saboro will come here and buy some land, and you will protect him, and when one of the Osagas goes to the Berees he can buy land there, and they must protect him and his wife and children."

"Yes; I see what you mean. I am content. I will do this whether the others do or not."

"But I assure you," continued the Professor, "that the others will be compelled to do as you do."

"How can we compel them?"

"No one will want to buy their land, and they will not become valuable for that reason, like yours, because the people who come here will buy only where they know there is a law and where they know they will be protected."

Uraso grasped the wonderful import of this statement, and became its most enthusiastic advocate. He had many talks with Marmo and Muro, and he presented the matter in such a way that most suitably appealed to the savage mind.

The all-absorbing topic now was the proposed expedition to the Illyas. Marmo, the Tuolo chief, had sent a message to their chief, in which he set forth the advantages which would accrue to them to quietly submit, and also stated that he did so willingly, in the belief such a course would be of the greatest and most lasting benefit.

Marmo had received no response, and the outlook boded no good. Preparations were begun, and Marmo insisted that his warriors should form part of the force, and that he himself would accompany the expedition. As the boys, by the aid of their helpers, had been at work on the guns from the time the factory was set up, they had a hundred and twenty guns completed. This was ample for any requirement.

Two new wagons were also made, and several smaller ones, designed for single steers, the latter being used by the Professor and the chiefs in going to and fro.

CHAPTER X

THE PECULIAR SAVAGE BELIEFS AND CUSTOMS

The chief Marmo had now an opportunity to learn another lesson he was not prepared for. Many of the warriors objected to going on the expedition. The work at the factory and in the various occupations so fascinated them that they begged to be excused.

At the request of the Professor many were excused from going, care having been taken to consult the boys who had charge of the various parts of the business as to the ones which could best be spared.

Marmo mused over these things. He saw the great cordiality that existed between his warriors and the other tribes. He was also gratified to see some of his men making things which were novel to him, as they were fascinating to the men.

The Krishnos were all about and were the personal charges of the Professor. He had them daily in the laboratory, and all seemed to be pleased and happy. Marmo wanted to know whether they desired to go home, but all declined. There seemed to be a fascination about the place he could not understand.

One evening the Professor saw a Tuolo worker stealthily coming up the pathway leading to the laboratory, and after looking about with a curi-

ous air, pushed open the door, and in the most subservient manner begged permission to speak.

The Professor took him by the hand and led him to a chair. "What is it you want, my man? Can I do anything for you?"

The hearty manner and smiling face of the Professor emboldened him to speak.

"I have a wife and three children in the Tuolo village, and I want permission to bring them here."

"Don't you want to go back there?"

"If I do then I will have no more work. I like the work. I can make many things now, and I want my family here."

This was an appeal which could not be neglected, and he responded in this manner: "You do not need to ask me to bring your family here. You have a right to do so."

"But my chief will not let me do so."

"Did you ask him?"

"No."

"Then I will send for him."

When Marmo appeared the Professor told him the desire of the man, and when he had concluded the chief was puzzled for a moment, and, turning to the warrior, said:

"I cannot understand why my warriors do not care about going to war. They like the machinery, and the way the little things are made, and to learn how to make them. The White Chief says you have a right to bring your family here. That is well; but you must not forget your people, and when you learn these wonderful things you must

come and teach the people at the village how to do them."

He was extremely gratified at this permission. A half hour afterwards the Professor called Tom and told him of the incident, and suggested that he should be provided with a quantity of food for the journey. But he had already gone. That was certainly sufficient to show the intense eagerness to bring back his people.

George and Ralph were the ones who were always on the alert for new things, and Jim made a good companion for them in this respect. The latter was the first one to actively canvass the subject of a name.

There had been too much to do even to think of this before, and if it occurred to the Professor he had never mentioned it. Jim went over to see the Professor as soon as the idea occurred to him.

The Professor smiled when he saw Jim's eagerness.

"Yes, the idea is a good one, but that is something which you boys will have to decide. It has not occurred to John and Blakely, I know."

"I thought it would be a good thing to call it Industria, or something of that kind," responded Jim.

"I like that name, but you settle it among yourselves." Jim was back very quickly, and rushing in to the boys, cried out:

"The Professor said it was up to us to get a name for it."

"Name for what?" asked Harry.

"For the town, of course."

"Well, what shall it be?" asked Tom.

"Call it America," shouted Will.

"Oh, that's too big a name," roared Ralph, with a scornful touch in his voice. "Just imagine how this would sound: 'William Rudel, Esq., America, Wonder Island?' What would the postmaster think of such an address?"

It did look a little out of proportion, as the boys laughed at the sally.

"Let's call it Independence; everybody seems to be pretty independent here," was Tom's suggestion.

"I have the best name in the lot."

"What is it?"

"Industria."

"There you are again with your Latin," answered Harry. "This is going to a real American town. None of your Latin endings, or any other dead language. This is a live town."

"Here is John; let's get a suggestion from him."

He heard the merry laughter, and as he approached wonderingly inquired about the cause of the hilarity. George said: "We have been holding a convention to find a name for the town. We have decided to leave it to you."

"Name of the town? Let me see. I suppose you want a stunning name? Something that will make people sit up and take notice. Eh? Well, if it turns out all right it doesn't need a name, and if it is a failure everybody will be calling it names."

The boys laughed at this first attempt that John

had ever essayed to treat a subject in a jesting way, but he continued: "If this convention hasn't enough wit about it to select a name I don't think you ought to get an outsider to make a suggestion. But seriously, Unity would be a good name; and so Hustletown."

"Unity is just the thing," suggested George. There was not a dissenting voice.

"Now that we have the name, I suppose we shall have to christen it to make it hold," remarked George.

"Considering the trials and tribulations we have gone through to put this town on the map it doesn't need any christening. If we work as hard to make it a success as we did to get it started we needn't be ashamed of it," said Harry.

"Probably, the same principle will apply in this case as the sentence uttered by the Hindoo priests at the christening of an infant."

"What is that?"

"Thou hast come into the world with all around thee smiling; so live that when thou departest thou mayest smile while all around thee weep."

"That is a beautiful sentiment. Hurrah for Unity!" and George raised his hat to start the shouting.

As the expedition against the Illyas was about ready to start, the time for the departure was set for the following day. Two of the wagons were brought into requisition, and loaded with sufficient provisions to prevent the necessity of foraging too much.

George and Harry begged to be taken along, as

they had put in some strenuous times during the two months at Unity, and this was readily granted. The other boys were to remain and take charge of the active work. John had command of the expedition, and Blakely had now too much work at the new town to enable him to take part.

Over three hundred warriors were mustered for the expedition. One hundred of the picked men had the muzzle-loading guns, and an ample supply of ammunition was stored in the wagons, and each gun bearer had twenty-five rounds.

The Professor said, on the eve of their departure: "I have every confidence in the ability of Mr. Varney to make it unnecessary to give him any advice, but I must say a word to all the warriors. You are going to the tribes, not for the purpose of revenge. We know they have captives in their possession, and we have demanded their return. They sent us an insulting message.

"Notwithstanding this, we must consider that they have sent us this reply out of ignorance of our true purpose. Each man must conduct himself as the chiefs dictate. There must be no killing except in self-defense."

Muro and Uraso, as well as Ralsea, were to accompany them, but the other chiefs were kept at home, this arrangement having been made because the others really preferred to continue the work in the factory and field.

It was a glorious day to begin the campaign. George and Harry were in their element.

"What a wonderful thing it is to look at these people now, and recall what our situation was a

year ago," said Harry, as they drove down the road which had been made from the village to the east.

"Yes; a year ago, we were having some troubles, as it was about that time we got the first intelligence that these people were on the island," answered George.

"I had particular reference to the trip we made by sea, when we were wrecked the second time."

The entire column marched out past the Professor and the chiefs Oma, Suros, Marmo and Tastoa. The six tribes had contributed to the expedition, which they hoped would end all future wars, and put the island in a condition of peace, and thus enable them to carry out the great work planned by the Professor.

Before evening of the second day the main Saboro village came in sight. Muro was in a heaven of delight. Many of his warriors were in the column, and some still remained at Unity. But the women and children were still there, and they rushed out to meet the advancing column.

The news of the uprising of the Illyas was confirmed. A large party of them were less than a day's march to the east, and the appearance of the fighting force was a welcome one. There was no reason to apprehend that they had any knowledge of the surrender of the Tuolos.

The night and part of the day spent at the Saboro village was a period of feasting. Uraso met his sister, the wife of Muro, and the boys were lionized by the chief's family, who took particular pleasure in entertaining them. They had heard

so much about the remarkable boys, and their capacity to make the beautiful things.

Harry and George brought with them a number of the mirrors, and those, with other little trinkets, were presented to the women. The boys were particularly impressed with Muro's eldest son, a boy of their same age, and George won Muro's heart when he asked if he could not accompany them.

Speaking to Harry he said: "Wouldn't Lolo enjoy the work at the factory? I hope he will let us take him with us when we go back."

"I am going to ask Muro," replied Harry, and he sought him out at once. "We want Lolo to go back with us to Unity."

Muro was delighted at the proposal, and he answered: "Yes; Lolo shall go back with us, because all of my family are going with us and we shall live there."

This news was a source of the greatest pleasure, you may be sure, and it was most gratifying to Muro, because he admired the boys.

"Lolo will like to work in the shop with you. He can now make the best bows in the tribe, and he makes fine arrows." And Lolo exhibited some of his handiwork, which, from the standpoint of the native weapons, was really creditable.

Returning now to Unity, we shall have to relate some very singular things which should be mentioned, as it shows the peculiar beliefs and practices of the natives.

On the day the force left the village occurred the first death in Unity. This was one of the

warriors, who had been wounded during the last fight with the Tuolos and Illyas, and he had lingered along until he finally succumbed. He was one of the best men, and was mourned by the Osagas, of which he was a member.

Singularly, another of the same tribe died the following morning, who was the exact opposite of the warrior. Within six hours of the death

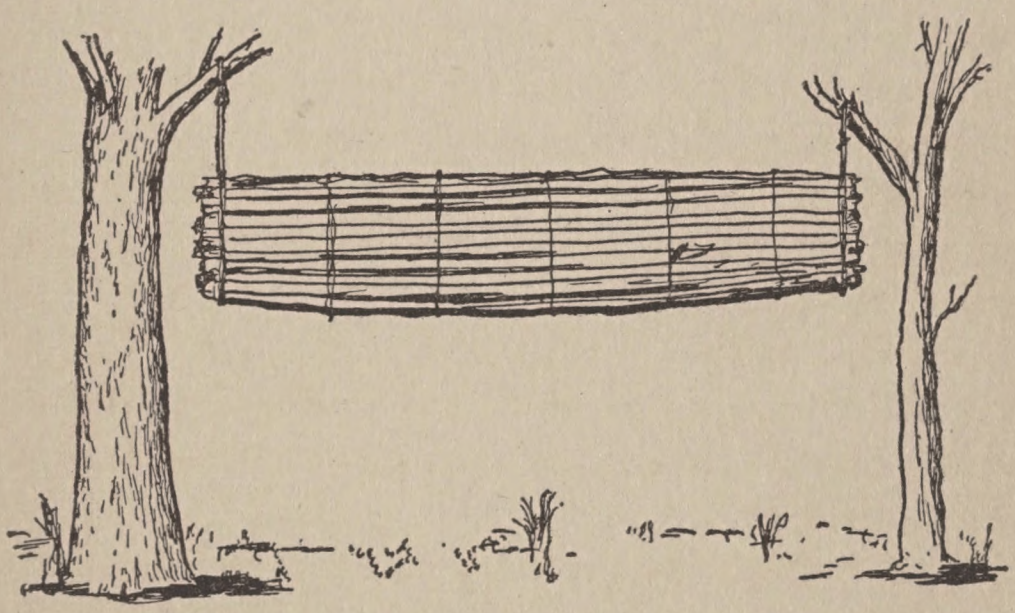


Fig. 13. Ready for the Happy Hunting Grounds.

of the latter his friends carried him away, and he was buried. The warrior, however, was not buried, but, instead, his body was carried to an open place, fully a half mile beyond the town, and placed on a hanging cot suspended from two trees.

The boys witnessed the ceremonies, and could not understand the meaning of it.

"Why do they bury one so soon after death, and keep the other for several days, and then suspend his body in the air?" asked Tom.

The Professor, who attended both ceremonies, responded: "This action on their part has a great significance. In most savage countries there is no more noble thing than to die on the battlefield. Usually those who die in that way are not accorded a burial, generally, because, in case such a warrior belongs to a defeated party, his friends do not have the opportunity to inter the body.

"Sir Samuel Baker, in his book, 'The Explorations on the White Nile,' relates an incident where he came to a village which had two graveyards, on opposite sides of the road. On one side were the scattered bones of the dead, and on the other side mounds to indicate burial plots.

"On questioning the chief, he said: 'Yes; our honored dead have their bones exposed, as you see, but those who were of no use are put out of sight underground."

"So the object seemed to be to keep them where the people could see them?"

"That appears to be the reason the chief gave to Baker. But there may be another reason for this custom, and I shall get Suros' views on that subject."

"Isn't there some religious meaning connected with it," asked Ralph.

"I do not think so. Here is Suros; let us question him."

As Suros approached the Professor said: "I notice that one has been put underground and the other not; why do they observe this difference?"

"We cannot honor the dead by allowing them to go back to the earth."

"Why will it do any good to honor the dead?"

"If we did not honor them, no one would want to be great. No one would like to be a great warrior."

"Is that the only reward a man has, to be honored after he is dead?"

"What other reward has a man?"

"Do you not think man will live hereafter?"

"When? After he dies?"

"No; how can man live after he dies, and his body is given to the winds or to the earth?"

"The white man believes he will live again?"

"Does the white man believe the yak will live again?"

"No."

"Well the yak is stronger than a man, and if the yak cannot live again, then how can man, who is not so strong, expect to do so?"

This was a bit of philosophy which sounded curiously to the boys, and the Professor, noticing it, said: "Singularly, this is the same answer which Sir Samuel Baker obtained from certain African tribes, when he questioned them in like manner."

But the Professor was interested in Suros' statement that they would not permit the body of the honored dead to go back to the earth, and he continued:

"You said that you did not want the honored dead to go back to the earth. When you give his body to the air, does it not go back to the earth?"

"No; the earth and the air are entirely different. The Great Spirit is in the air; not in the earth."

"Then you give him to the Great Spirit?"

"Yes; the Great Spirit takes his body."

"Don't you believe that man has a spirit also?"

"No; because we have never seen it."

"But you have never seen the Great Spirit, and yet you say there is one."

"We have seen the Great Spirit. He comes when it rains, and we can see him and hear him. We can feel the wind that he blows, and we can see the great light which he makes every day, and the smaller lights at his villages every night."

Two things were thus impressed on the boys—namely, that they considered the air entirely distinct from the earth, and that the Great Spirit made the thunder and lightning, and that the sun was the Spirit's light by day, and the moon and stars the lights of his villages by night.

Notwithstanding Suros' limited knowledge, it must be said that in his further talk with the Professor he showed himself to be possessed of qualities which placed him far above the common run of the natives. When he was asked why honor was such a prize to them, he answered:

"Our good men are happy to know that they are so placed that the Great Spirit can take them. What greater happiness is there for him?"

"Don't you believe that trying to make your people happy and contented will please the Great Spirit?"

"We do not know that. We do not know why the Great Spirit should want the bodies of our great warriors and good men. We cannot understand it."

"The white man believes that if you do good to your fellow-man it will please the Great Spirit."

"That may be; but I do not see why. There is no reason why he should care how I treat my people. That is not what he is up there for. What good will it do him? How will it help him? I do not believe many of the things I have been told by the wise men, and I have never sacrificed the captives I have taken, although my father before me did. I try to make my people happy, because when I see the Great Spirit giving us the day and the bright light and the rain, so that the things about us may grow, it seems to me that he is trying to be good to us, and I believe that is what we should do to each other."

CHAPTER XI

EXPEDITION TO SUBDUE THE ILLYAS

The occupation of the little houses by the families of the natives gave the boys the first close view of the people in their home lives. They were exceedingly primitive. The leaf of the plantain tree was the greatest boon to these people, and the women were engaged most of the time in removing the beautiful fiber and in laboriously weaving cloth from the strands.

They were exceedingly deft in this, and it is singular how quickly they grasped the idea of the loom, as a means to make a better article. The loom used by them was a very crude affair, and an idea may be gained of its form by the accompanying illustration, which shows the fork of a tree branch (A), which serves to hold the ends of the warp threads (B). To weave the goods, the woof thread (C) is threaded back and forth, and as they had no needles for the purpose, a thorn was used.

This thorn had no eye, but its large end was split, and the end of the thread held in the cleft thus made. Every family had this primitive loom, and the whole time, outside of their other household duties, was given to the weaving process.

The size of each woven piece was about twelve by fifteen inches, and the different sections were afterwards sewn together. When they saw the

more modern looms at work it interested them intensely, and the Professor, noticing their eagerness and natural talents in this direction, concluded that this was a good field to encourage the industry.

Most of the looms made goods thirty inches wide, and it was not long before several of the women were instructed in the art of using the looms. Like all of the low order of people, they

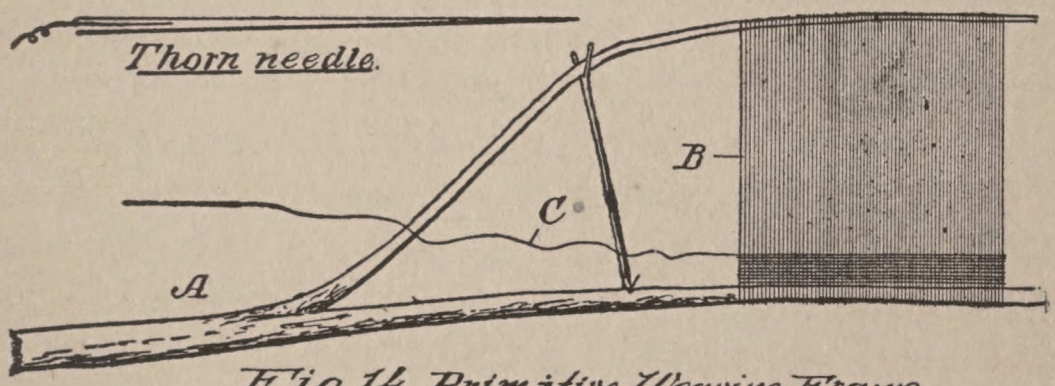


Fig. 14. Primitive Weaving Frame.

were extremely fond of colors, and that is one of the things which attracted them to the fabrics which had been previously made and exhibited. At the end of the week they were paid for their work, the same as the others who were employed.

The Professor now considered it time to make a change in the system of providing supplies. Under the direction of Will, a store was set up, which had on hand a supply of vegetables and game. As many of the warriors were away, and the others were generally employed in the workshop and fields, some systematic effort had to be made to gather food supplies and hunt.

By offering certain sums for such articles the Professor induced individual effort in that direction. The provender thus provided was placed on sale in the store, and by every art the heads of families were encouraged to purchase those things and take them home for consumption there.

Gradually, the workers were made to understand that a certain sum would be expected in return for their board, so that, in course of time, each one became accustomed to know the values of certain things all of which were measured by the coins now in circulation.

The kitchen utensils were very limited indeed. They had no metal vessels of any kind. Any article of that kind was worth a fortune, and it was only the chiefs who had such things, and they were obtained from the wrecks of vessels which had reached them from time to time.

Under the direction of the Professor, considerable time was given to the bringing in of ores, particularly iron, and the process of recovering the metals from the ores was undertaken by a considerable part of the force.

Charcoal and coke were turned out, as a preliminary to the smelting of the ores, and as fast as the metal was in shape, cooking vessels of various sizes were manufactured, and these were placed on sale at the store. It was thus possible for each family to acquire several articles of this kind, which heretofore had been considered the most valuable of all treasures.

Such a thing as a chair or a table was unknown on the island. The beds were made of the native

grasses, strewn on the floor. It will be understood, therefore, that the manner of furnishing the houses occupied by the whites was a marvel; and when the families of the various workers moved into their new possessions, it naturally dawned on them that chairs and tables, as well as properly arranged beds, should accompany such luxury.

The Professor was at the homes of these people daily, suggesting ideas for comfort and convenience. One of the things which interested him most was the subject of cleanliness. People living in the manner to which they were accustomed made the sanitary part of the domestic arrangement an exceedingly difficult problem.

The necessity of cleanliness was impressed on them very forcibly when, later on, he was called to administer to many of the children, who were attacked by diseases, brought on directly by carelessness in thoroughly removing all dirt and decaying matter.

To a certain degree the natives understood this, and the subject has been referred to previously, where they had the habit of anointing their bodies and those of the infants with various oils, which were obnoxious to insects and germs.

That knowledge made the task of using disinfectants much easier to instill in their minds. It was impressed on them that properly caring for the home was a daily task, and must not be neglected.

The women used combs made from the fins of fish. These were constructed in the following

manner: The entire fin was removed, and the bony structure at the base of the teeth was bound between two strips of bamboo, and tied around by fibers, as shown. The whole was then placed in a vessel containing boiling water. The result was that when taken out the meat of the fish, being glue-like, would act as a cement to hold the teeth in place.

Such combs are anything but sanitary, as might be surmised, and the inhabitants were subject to

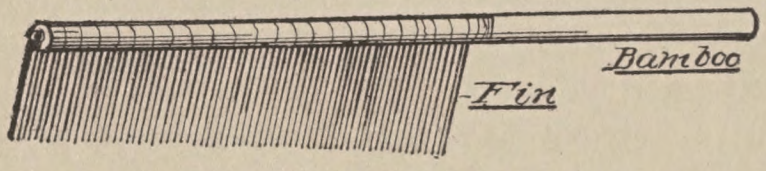


Fig. 15. Comb from fin of Fish.

pests arising from articles so made. Their only salvation was, in fact, the daily habit of using oil, and, from a sanitary point of view, there was nothing objectionable to this excepting the odor which naturally followed, due to the oil becoming rancid. The boys then began to make combs from a specie of bamboo, and from the ironwood tree.

During one of the fishing trips the boys brought home an immense turtle. The Professor's eyes sparkled when he saw it.

Will related their experience in capturing it. "Is it good to eat?" he asked.

"Yes; all turtles and tortoises are good to eat."

"What is the difference between the two?"

"The turtle is a sea animal, and the tortoise

a land and water animal. You must have caught this near the sea, as it is a specie of turtle called the Testudo."

"What a beautiful mottled top it has!"

"That is why it interested me so much," replied the Professor. "You now have something that is far better than the wood for making combs and other like articles."

"Isn't that fine? Will it be difficult to make them up from this?"

"It is the simplest thing in the world. The outer shell, which is all that is used, is put into boiling water, and this softens it so that it can be worked easily."

"It seems singular that it is called a 'tortoise' shell if the land animals are called tortoises."

"When the shell first became a matter of commerce, it was supposed that the turtle and the tortoise were the same, and the name tortoise being much older than turtle, the former appellation remained in designating the shell."

The day and night of festivities of John and the warriors, at the Saboro village, was ended, and the column took up its march for the country of the Illyas.

Several of the scouts, sent out two days before, returned during the night, and reported that there was a strong force directly ahead and that the lower villages were also sending up a body of men, but that the latter were still two days away.

Calling Muro, John asked: "What is the nature of the country to the extreme south, or next to the sea?"

"I have never been there, but it is elevated, and is a fine country. One of my men has been there, and he may be able to tell you something about it. I will call him."

The warrior alluded to was tall, handsome and fully tattooed, as was the custom with the most distinguished of the Saboros.

"Can you tell me," asked John, "what the nature of the country is south of the mountains, and near the sea?"

"It is the country of the wise men of the Illyas. They will not allow others to go near there."

"Do you know why?"

"It is said there are wonderful things there."

"Do you know whether there are any big holes in the ground there?"

"Yes; and in some of them they keep their captives."

"Do they sacrifice their captives in those places?"

"No; they take them from those places to the villages."

"At what times do they make the sacrifices?"

"When the night is dark."

John understood from this that the sacrifices were during the period when there was no moon.

"Why do you suppose that they wait for that time?" asked George.

"Because the Great Spirit out of anger has hidden the light and to appease him the sacrifices are offered at that period. This is one of the tales that the wise men give out as the excuse for the ceremony."

John had another motive for these questions, as will appear later on. The main Illyas village was far to the north of the caves mentioned. Besides the main one were three others, all ranging along the western base of the mountain.

"How long will it take us," asked John, "to reach the main village?"

"Osaga knows about that, as he was near there, and was detained for several weeks before he escaped."

"I had forgotten about that." He was, however, at this time, one of the scouts, and when he returned later in the evening, said:

"We can reach there in two days, unless we should be met by the Illyas on the way. I do not think they will retreat without making a show of fight, as they will have all their warriors in the field, when they know we are marching against them."

At the rate they were going, the main force of the enemy would be reached during the day, unless they should retreat. The opinion of both Uraso and Muro was that they would not permit too close approach to the village before offering fight.

The entire route from Unity, and through the Saboro country, was one continual stretch of immense undulating plains, covered at intervals with magnificent forests, and it was evident that the soil was rich and capable of yielding any products in profusion.

The weather, too, was magnificent. Indeed, it was at a time of the year when there were few

storms, the moisture being sufficient to support the growing vegetation and keeping it a beautiful green. What a paradise this part of the island would be made, if it could be maintained in peace!

The march was a continued and steady one, the warriors appearing happy and acted as though they were going to a festival, instead of to war. Early in the afternoon the advance scouts reported the first sight of the savages, but only detached bands, which indicated, however, that they were not far away.

Several hours before they had entered the Illyas' country. There was no strict dividing line between the different countries, but it appeared to be tacitly agreed that certain water courses, or other natural lines, marked the territorial limits of each.

These divisions were so little understood, in fact, by either, that they caused frequent disputes. A party from one tribe in hunting would, incautiously, venture too far, and if the other party happened to be near, and in sufficient force, would attack on the plea that the territory had been invaded.

This was a matter which the present campaign would settle, because the Professor saw the necessity of accurately prescribing the limits held by each tribe.

It was five o'clock in the evening before reports came in that the main body of the enemy was in sight. John went forward with Uraso and Muro, fully a mile beyond the main force, and

on the way selected a good camping spot, leaving several there to order the main body to encamp when they arrived.

With the scouts now returning, and which were picked up, a fairly adequate idea was obtained as to the number, which was variously estimated at two hundred and fifty, which did not take into consideration the warriors from the other villages, because they now had knowledge of at least one party from the south, on the way to reinforce the Illyas.

John gave strict orders that no one should fire a gun during the night, and that a double line of guards should be maintained. The course pursued during the campaign was as follows: Thirty pickets were selected for the watch, five from each tribe. These formed fifteen posts, two warriors being at each post, and it was arranged that the two should be of different tribes, and as all were in supporting distance of each other, in case of an alarm, one of the two watchers would thus be in a position to quickly alarm the camp.

An advance set of pickets was also thrown out, under the personal command of Muro, to watch the enemies' camp. Fortunately, there was no alarm during the night. Early in the morning the forces were put in line for approaching the Illyas' camp.

When the first advance came within sight of their camp, the utmost consternation and confusion resulted, showing how carefully John had concealed their movements.

Muro's scouts had the fortune to capture one

of the Illyas, who was evidently one of the hunters, and the captive was brought in at the time when some of his own men had advanced uncautiously too far.

He was brought before John at once, who addressed him as follows:

"Why have your people started out on the warpath against us?"

"Because you killed our warriors in the last battle."

It is singular how the natives in all their interviews of like nature, always found it convenient to refer to the last and most immediate act as a particular reason for their enmity. In this respect they were veritable children.

They might have been, as they were in this case, the original aggressors, but if an attempt is made to repay them the original cause of the strife is forgotten, and the last act only is considered. John knew it would be of no use to argue the matter with him.

"You may go back to your chief and tell him that we have come to get the captives he has. You must tell him that we have no desire to injure him or his people. Tell him that all the tribes are now united, and that if he does not give up the white people and all others, we will take him and his villages, and give his lands to the other tribes.

"You must further tell him that we must have his answer at once, and if he does not answer by the time the sun is above us (noon), we will consider him our enemy, and shall attack him."

The captive received full instructions from Uraso, who warned him that if he failed to convey this information in the manner given it would go hard with him.

John went forward with the prisoner, and he was released within sight of the Illyas' camp. The enemy was at that time in great commotion, as they were, from all indications, preparing for defense.

They occupied a naturally strong position. The camp was on the western side of a hill and at the bottom was a small stream.

Directly behind the camp was a heavy forest, which, in case of retreat, would afford them shelter. There was a bend in the river, where the camp was located, so that the position was impregnable as against the native weapons.

The Illyas were not counting on meeting a foe armed with guns like the allies possessed. They did not conceive how their enemies could possibly make a sufficient number of guns to count against their numbers and their skill.

In the talks which John had with Uraso he learned the history of this peculiar tribe. Originally the tribe had practical sway over the entire island. They were bitter and vindictive, and this intense feeling was that which acted against them in the end.

The result was that in times past a constant tribal warfare was in evidence among the heads of the leading families. The Kurabus and the Tuolos were originally Illyas, or offshoots from this great tribe. This was also shown by the

characteristics of those three tribes, and by their dress as well as language.

John had noticed that the Berees were the whitest people on the island, and that the Osagas and Saboros were much lighter in color than the other tribes. Uraso confirmed Suros' statement to the Professor, that there was white blood in the veins of many of the people of these three tribes, brought about by castaways who had been adopted by the people in earlier times.

The Illyas kept themselves aloof from the others, excepting the Tuolos and Kurabus, and these three tribes were the only ones who still adhered to the custom of offering up captives as sacrifices.

CHAPTER XII

THE PERILOUS TRIP OF THE WAGON

Affairs at Unity were moving along at marvelous speed. Suros, chief of the Berees, announced to the Professor that he did not intend to return to his country, but would send for his family and the families of all his chiefs. This was, indeed, a pleasant surprise for the Professor.

Oma, of the Brabos, was the next to fall into line, and we have already stated that such was Muro's intention. The bringing together of all these interests, to form one common family, was really the intention of the Professor, and it was now being carried out without any suggestion on his part.

Each day brought to the village accessions from some of the tribes, mainly the women and children of those who were employed, or who were with John's forces.

Four days after John's departure the Professor saw one of the Tuolos approaching, carrying an infant, with his wife and two other children. The Professor went out to meet them, calling Will, as he saw they were in a famished condition. It was the native referred to previously, who had begged permission to bring his family to Unity.

Several of the little cottages had been completed, and the surprise of the Tuolo and his wife

was complete when he led them to one of these homes, and installed them in it.

Food was brought, and the native cooks ordered to prepare it for them at once. The act so astonished the Tuolo chief, Marmo, that he could not express himself. For a day he sat pondering. The Professor noticed the act, but he said nothing. The next morning Marmo called, and said:

"I can see why the White Chief told me it was well to act so the people would not want another chief."

"But I am not acting in this way so that the people will want to keep me as their chief."

This reply puzzled him.

"But why do you treat my people in this way?"

"Because he is a man just like myself. I have no right to treat him in any other way."

"But he is only a ravoo (common) man."

"Why is he only a common man?"

"Because he is not a warrior, nor were his people warriors before him."

"But he is a man, the same as you and I are. Because he is not a warrior, or was not born of some one who was a warrior, or if he does not belong to the family of a chief, makes no difference to the white man. His children may become chiefs, or great men, and if we show them that they may become like we are, it will make all of them better, and it will not injure us."

This philosophy was too deep for the chieftain. He could not comprehend it, nor could he find

words to express his opinions of the new light which it gave him.

"Is that why you teach the people to make so many things?"

"No; that is for an entirely different reason. We teach people to make these things so they may be able to help themselves and make their wives and children happy. We try to teach them that it is wrong to be idle. To let them know that there is a better way to live than by fighting each other or injuring their neighbors."

"But why do you act so kindly to one of my people when we tried to kill you?"

"That makes no difference to us now. You acted that way because you did not know any better. You would not try to injure us now, would you? Do you think that man would be my enemy? When he tells his friends what I have done, will they be my enemy?"

"These things are all so new to me. There will be no more Tuolos, or Osagas, or Berees."

"Yes; there will be the same tribes always. In the white man's country there are still the same tribes in the different countries. They love to think of their own country and their own people, even though they may live with the other tribes, and when a man goes from one tribe to live with another, the people protect him just the same as though he was one of them."

The Professor was not yet through with his lesson, and suggested that Marmo should accompany him. They wandered through the town, and called at the cottage of the newly arrived Tuolo.

The children were playing about, and the wife was supremely happy, but awed when the Professor and chief appeared.

The Professor took up the little one and affectionately caressed it, to the astonishment of the mother. She knew the Chief Marmo would not condescend to such an act; but to think that the Great White Chief should do such a thing was something beyond her comprehension.

Marmo looked on in amazement. It was another thing which was unlike any teaching or belief that he had ever known, that it made a powerful impression on him.

This is but one incident in the history of the village which tended to instill in the minds of the people the cardinal duty of man to man. It was a practical example, and the knowledge of it went from family to family. It became one of the topics of conversation among the men. Equal and exact justice was meted out to each, irrespective of what their tribal relations might be.

In the absence of Harry and George, Ralph and Jim had charge of the factory, and were busy each day turning out plows and other agricultural implements. At the suggestion of the Professor, eight more of the steers had been trained to work, and he gathered together a dozen of the best men, and gave instructions to secure as many of the yaks as could be found.

He offered certain sums for this purpose. It was known that to the west, and north of the great forest, were large herds running wild. The proposal stirred them to activity. The party pre-

pared for the hunt, and in this were assisted by Blakely, who gave them many timely hints as to the best method to lasso them.

The first expedition started the day after John left, and within a week the first installment of ten animals arrived, and they had returned for more. These were tamed and broken to work. The scenes about the town were assuming the proportions of a vast beehive of the most earnest and enthusiastic workers that it was possible to imagine.

Fields were now laid out, and certain money offers made for the production of seeds of various kinds. Coffee-tree shoots, nutmeg plants, cocoa cuttings, and many other like species of vegetation were apportioned to the newly plowed fields.

Every kind of vegetable known to the island, and which now grew in a wild, but scattered, state, was sought for, and distributed in small patches over the plowed area. Fruit trees were set out, and these latter, with a view to make them the home sites which were to be the next lines to be developed.

It will thus be seen that there was enough to tax the energies of Blakely and the Professor, to keep the laborers employed, and prevent any drones from getting into the hive.

When the captive Illyas which John had sent with the ultimatum did not return, nor did the enemy show any symptoms of complying when the sun neared midday, it was concluded that the

only plan to pursue would be a quick and a sharp assault.

The moment the sun reached its height, John ordered Muro to take one hundred of the men by a detour to the right, and Uraso with a like number to the left.

"Cross the stream and close up behind them in the woods. I will make the attack, and you remain at a distance. If they should attempt to retreat I will follow them up rapidly. We must, if possible, force their surrender."

The two forces were off promptly, and within a half hour John judged that they must be in position. The Illyas were still on the hill in force, apparently not suspecting that two flanking columns were in their rear.

As John gave the order to march forward there was the crack of a half dozen guns to their right, in the position occupied by Muro's force. This startled the Illyas, as it did John. The latter interpreted this at once. It was, undoubtedly, a reinforcing band which Muro had intercepted.

This was indeed the case. The knowledge of this force coming to their assistance, was probably the reason why the Illyas were so defiant. Muro, at the head of fifty of his men, charged the band, to prevent them from uniting, but at the same time it brought down on him a large portion of the Illyas. Uraso, suspecting the truth, and knowing that the excited movement of the Illyas indicated a rush to assist, broke through the woods and thus struck them on their left flank, which so surprised them that they broke

in confusion and fled before John and the main body could come up.

The entire Illyas force was now in confusion. John was in possession of their camp, and Uraso's warriors were hurrying through the dense woods, so that between the three forces, a number were captured in the effort to escape to the east and south.

Within an hour, not an Illyas was in sight, except those captured, but the main force, unfortunately, escaped. The wagons were brought up, and now came the problem, how to get them through the forest, without making too much of a detour.

Uraso suggested that Stut should take a sufficient number of warriors to afford protection, and descend the stream to a point below where the country was clearer, and then trail to the east and meet the main column five miles west of the main village.

The pursuers, under the leadership of John, followed the trails of the disorganized Illyas, in the hope that they would be able to be close on their heels when they emerged from the forest four miles beyond.

They found this forest maze the most remarkable of any wooded area on the island. The trees were not only immense, but the undergrowth exceedingly dense. It is not often the case that the two growths are found together, and it would have been impossible to get the wagons through the mass.

This forest was in reality the great barrier,

which kept the Illyas in such a protected position against the inroads of the other tribes, even though they should have combined, and they counted on this bulwark to protect them in the present case.

It took the pursuing force over three hours to push its way through, and they had the satisfaction of seeing the main body of the Illyas beyond, and brought together in a compact organization. As soon as the opening was reached, they halted for the noon meal, and instructions were given to follow up as hurriedly as possible.

"We should move our force to the south, and attack them from that side," said John, "for the reason that their only hope of reinforcements is from that quarter."

The villages were lying along the base of the mountain range, the general altitude of the great plain being fully two hundred feet higher than the other level portions of the island. The mountains to the east, while not high as mountains go, were by far the greatest of any on the island, and John was anxious to know their character, for reasons heretofore explained.

In two hours more they would reach the vicinity of the main village, and the great struggle for the mastery would begin. In the distance could be seen the main portion of the town, and it was far more imposing than any other in the island. There was more or less a mystery about the place.

Uraso said: "The place we are now going to is the oldest village in the country. Many, many years ago it was a great village, and had big

houses. They were built by some people that no one knows, but they were not built to live in."

"Do you know what they are like?" asked John.

"Nobody can tell, because they do not keep captives there, and only take them to that place for the sacrifices."

"How do you know that the place has the wonderful buildings you speak of?"

"This was learned from the only captive who ever escaped from them at the place. I was kept at the village to the north, and it was from that place I escaped."

As the village was neared the sight of the buildings astonished John. While not massive, they were of a type entirely distinct from the native huts. It was built on an elevated plateau and amidst most magnificent trees, the most prominent of which were the great redwoods.

Some little indications of ground cultivation were found, as they passed the deserted huts on their way. Small patches of yam and cassava were the principal vegetables noticed.

It was nearly four o'clock before they crossed a stream of water, flowing to the south, and beyond which a good glimpse of the village could be seen. John surveyed the scene and was astonished at the character of the spot, since it had evidently been chosen by design, and for some particular reason.

Its location at an altitude which commanded a view to the north and south, and also afforded a view to the west, betokened some reason not compatible with the savage idea of a town. All

villages thus far found were close to streams, and were located apparently by chance, but here was a town which was more like a civilized place, since it was so located that it afforded the finest opportunity for drainage.

But another surprise was in store for John. What are those peculiarly formed hills which run to the right and left?" he asked.

Muro had noticed them, but was unable to answer.

"I have heard," said Uraso, "that they have earth-houses to protect the town, but I do not know how they are made."

This information was sufficient to inform John that the town was actually provided with a chain of defensive works, and this greatly added to his astonishment.

"We are certainly getting at the heart of this mystery," he said, musingly, as Muro came up. The latter informed him that they had captured two Illyas who were making their way to the village from the south, and within ten minutes they were brought before him.

John questioned them, but they refused to impart any information. The direction from which they had come occasioned some uneasiness because the wagons were en route from that quarter, and they might be runners to the main village for the purpose of informing the chief of the fact, or, they might be from one of the villages announcing reinforcements.

As night approached, and no word was had from the force with the wagon, John directed Muro

to take twenty-five of the best men, and go directly south in search of the convoy.

George and Harry accompanied the teams, and when they left the main column the forest was skirted in their trip southwardly. It was known that the forest was less dense in that direction, and after traveling thus for nearly four hours, the men delegated to beat the forest to the east, announced that they might safely turn to the east, which meant two hours more of struggling through a country which, without the warriors to aid them, would have been impossible.

Most of the men were ahead of the team with their bolos, cutting down and dragging away the trees and bushes, and thus forming a trail which would allow the wagons to pass. It was past six in the evening when the river was reached.

In order to gain as much time as possible, Stut and the boys concluded to push across, and move northwardly along the eastern bank, as it was evident the eastern shore afforded the best route.

Before the plan could be put into execution a body of Illyas appeared in force before them. They hastily drew back, and after consulting, concluded to proceed north along the western bank.

They had not proceeded a quarter of a mile before they ran into an ambush of Illyas, and two men were struck by arrows. Stut gave the order to fire, and the bush was cleared. Immediately a force appeared in their rear, but Stut advised an advance, as such a course would bring them closer to relief.

Another mile was traversed, but the first les-

son was heeded, and the enemy did not come close enough to enable the gunmen to get an opportunity to shoot. But now an unforeseen obstacle presented itself. They had been marching along the more or less elevated bank of the stream, and directly in their path was a stream flowing into the main one, with steep and rocky sides, so precipitous that it would be impossible for the wagons to cross them, heavily laden as they were.

The Illyas appeared in force behind them, and apparently none were to the front, thus indicating that they did not believe the wagons could cross, and in this they were right. It was growing dark. Harry suggested that they make camp and arrange for protection during the night.

This was done, the two wagons being placed thirty feet apart, and the fort sections were used to connect the rear ends of the wagons, so that a U-shaped fort was thus provided, the open end of the fort being toward the river, which was the side they had no fear of, so far as the savages were concerned.

While these preparations were going on no attempt was made to attack them. "They are either waiting for morning, or for reinforcements," was Stut's comment.

"Do you think it would be possible to get a messenger through to John?" asked George.

"Yes; but it would be better to send two."

"We can easily spare them," responded Harry, "and you had better select them at once."

Two intelligent warriors, one a Saboro, well known to Stut, and an Osaga, were delegated to

run the risk, and they started to the north along the river.

The night was intensely dark, but notwithstanding this Muro pushed forward to the south, and the utmost speed, under those conditions, was not more than a mile or mile and a half an hour.

It was known that reinforcements were on the way from the south. They might meet such a force, and the utmost caution was necessary. It was fortunate that the two messengers from Stut heard Muro's warriors, and for the purpose of determining who they were, approached closely, and made themselves known.

This intelligence was sufficient for Muro to act. The scouts guided them back, and as it was beginning to grow light the cracks of several guns were sufficient to indicate the direction of the wagons, and the fact that the attack had begun.

Muro was a tactician. The scouts stated the situation, with the impassible ravine to the north, and the attackers to the south of their position. His force was on the eastern side of the river, and moving back a sufficient distance to prevent knowledge of his presence from reaching the Illyas, went to the south, and crossed the river in their rear.

The attack of the savages was in force against the wagon, and the spirited cracks of the guns showed Muro that he must make haste if he would have a part in it.

Harry and George were seasoned fighters, but in this case they were entirely in the dark as to the numbers which opposed them. This lack of

knowledge was the only thing which gave them any concern. They knew that sooner or later John would rescue them in force. The problem was to resist and gain time.

The Illyas had heretofore proven themselves wonderful fighters and remarkably tenacious. This attack was a more determined one than they had ever witnessed. There was no cessation in their forward advance, and they were most skillful in seeking cover.

The boys looked at each other, but neither spoke his fears, if he had any; to say the least, it was the most businesslike of anything which they had witnessed.

Suddenly, they heard the noise of a volley behind the Illyas, and the latter made a concerted rush for the underbrush to the west, as Muro, with his men, sprang forward through the clearing; and the boys, with Stut, sprang from the wagon and started the cheering, followed by the warriors.

Muro rushed up and embraced Stut and the boys. A hurried breakfast was prepared, and the fort sections replaced. There was no time to lose. They must get back to John and be prepared to take part in the capture of the great village of the Illyas.

CHAPTER XIII

THE REMARKABLE DISCOVERY AT BLAKELY'S MOUNTAIN HOME

It was the custom of the Professor to take the boys each week for an outing in some direction from Unity. The most attractive part was toward the great forest, west of the large river. Several boats had been made, which were used principally for fishing, and one of these was usually taken. They would then sail down the little branch stream, on which the town was located, and cross the large river.

During the entire time they were at the village Blakely had not gone across the river, although he frequently indicated a desire to do so, particularly to look up the location of the home on the hill at the forest's edge, where he found seclusion from the savages for nearly nine months.

The Professor and the boys insisted on his accompanying them on this occasion, and having given instructions to the men, they manned the large boat and were soon on the western shore of the river.

The large quantity of driftwood, which was in evidence here, as elsewhere, attracted the attention of Jim, as he turned to the Professor.

"I have often wondered why it is that there is so much driftwood on the western shore of this stream, and hardly any on the eastern shore."

Blakely, his attention having been drawn to it, remarked that he had found this to be the case in a number of streams, not only on the island, but elsewhere.

"That is a singular thing," replied the Professor. "It is accounted for by the rotation of the earth, which is from west to east. The rotation of the earth in that direction also accounts for the prevailing trade winds which are from the east to the west."

"In what way should the rotation of the earth cause the drift to move westwardly?"

"There are two forces which act on a free object on the surface of the earth, namely, centrifugal and centripetal. The first named is that action which tends to throw an object outwardly, like dirt flying out from a rapidly moving wheel; and the latter action is that which draws inwardly. Thus the spokes might be likened to centripetal force. The attraction of gravitation in the earth is the centripetal force, and its rotation produces the centrifugal force. When an object, like a plumb bob, or an article floating on the water is free to move, it is found to lag behind the movement of the earth surface, this retarding movement being sufficient to cause it to creep to the west, with the result you have noticed."

The hill pointed out by Blakely was fully three miles west of the river. The four boys, Ralph, Tom, Jim and Will, with Blakely and the Professor, all armed with guns, made a party strong enough to enable them to successfully withstand the attack of any animal, and it was proposed to

make a trip through a portion of the forest, so as to get some idea of its character.

To carry out this plan, their course was directed to the west, and within an hour and a half were well in the thick of the wood. The first thing that attracted the attention of all were the magnificent trees, among them a species of pitch pine, together with immense redwood trees, and numerous oak species abounded.

Before they had penetrated a mile the first animals were seen. They had never been hunted, as the natives kept away from the forest fastnesses, and it was singular to see the familiarity of the animals. An immense panther, or tree leopard, fascinated the boys, and they maneuvered to get close enough for a shot. He was very wary, however, and Blakely and the Professor kept in the background while the boys stalked him from tree to tree, and finally Ralph had him in range and fired.

He crashed down but alighted on his feet, and without waiting for any explanations bounded over to the spot where Ralph and Will were crouched behind a fallen tree. Will saw the movement and called to Jim and Tom, and the latter, taking careful aim, fired, without, apparently, checking the animal.

With a powerful spring he landed on the tree, not five feet from the boys, and Jim shot the moment he landed, the shot taking effect in the left eye, and he dropped his head and lay still, hanging over the fallen tree.

This was exciting, while it lasted, and gave them

something to talk about for the rest of the day. Blakely dragged the animal down, and Ralph and Will, trembling as they were, had their knives out when Blakely commenced to skin the panther. It was a fine trophy, made doubly valuable, as it had been their first attempt to secure big game.

Fig. 16. The Marmoset

The boys regretted that Angel had not accompanied them, as they saw numerous orang-outan; and here for the first time they came across whole tribes of monkeys, particularly the marmoset, an interesting little creature. The most striking ones were the proboscis monkey, the face being not unlike that of an old man with an extremely long nose, with whiskers around the neck.

Blakely and the Professor made many notes of the trees, and discussed the uses to which they

might be put, and the boys had their eyes open for the wonderful display of animal life on all sides.

It was fully two o'clock before their steps were turned toward the north, so that the hill could be reached, and when they emerged from the forest,

FIG. 17. PROBOSCIS MONKEY

Blakely pointed out the spot and the best way to reach it. The boys went forward with a rush, and mounted the hill, but while they searched in every direction could not locate the rocky recess occupied by Blakely.

The latter came up smiling. "I told the Pro-

fessor you would have some trouble in finding it. Look directly above you."

About twenty feet from where they stood was a projecting rock, and to the left of it another, extending out at right angles.

"But how are we going to reach it?" asked Ralph.

"Go around farther to the right, and you will find a vine. I used that as a ladder."

Around to the right the boys scampered, each trying to get there first. There was no vine in sight. Blakely was coming up, as the boys turned back, disappointed.

"Not there?" he inquired. "It ran up this tree. What is this? Some one has cut it off and dragged it up to the shelf above; do you see it there?" and Blakely pointed to the vine stump, hidden by the grass and weeds.

The boys saw the plain evidence of the cuts.

"This is decidedly interesting," exclaimed Blakely, as he turned to the Professor. "This was done since I was here."

The only way to reach the ledge was to climb the tree and try to drag the vine from the ledge, and Ralph volunteered to do this.

It was not much of a task, and when the vine had been drawn down he moved out on the limb and easily stepped on the ledge of the nearest rock, and then drew over the vine so the boys could readily reach the main ledge.

Blakely was the last to gain the top, and he led the way around the first projecting rock. The view from this point was a charming one.

"Look to the east," cried Ralph; "see Unity beyond; isn't this fine?"

The boys now understood why this was a desirable place for Blakely. It appeared to be absolutely safe from either animals or man.

"How did you ever happen to find this place?" asked Tom.

"Simply by accident—the fact is, I stumbled on it. I mean that literally. You see there is only one point higher than this. That is directly above this ledge. I went up the hill from the forest side, and came out to the point, and, missing my footing, fell down to this ledge, and discovered that the only way I could get out was by the vine ladder."

"What is that?" exclaimed Will, springing back, and pointing to an object in front

Blakely started forward like a shot, and moved around the main point from which Will came. The boys followed. Directly ahead, and on the ledge in front of the recess were two skeletons. The boys were shocked at the sight, and the Professor stopped and intently examined them.

"Some one made this his home after I left it, that is sure. Here are things I never saw."

"Was this your gun?" asked Jim, as he picked up a rusty weapon.

"Yes," replied Blakely, in great excitement. "But how did it get here? I had it with me when I was captured the first time."

He looked at the Professor in amazement, and then began a minute search of the articles scat-

tered about, and lying in the little coves within the main recess. Here were found a sextant, several knives, some coins, a bunch of keys, a package of letters, written in German, a revolver, but no ammunition, various articles of clothing, all in the last stages of decay and eaten with holes by insects.

But the condition of the skeletons caused the

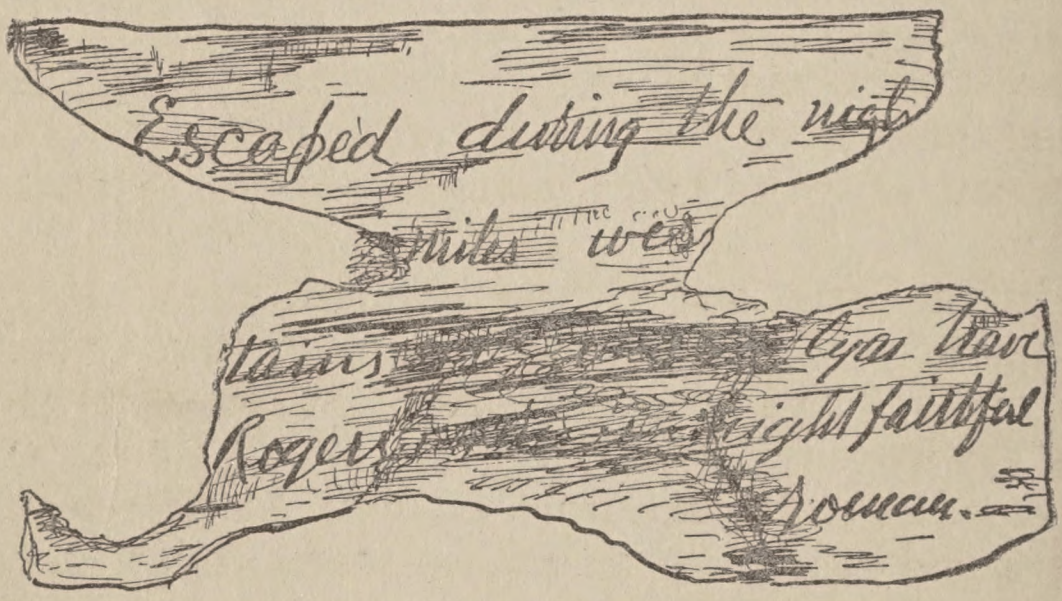


Fig. 18. The Mysterious Message.

greatest speculation. They were lying near together, and there was no indication of a struggle between them. One was lying with the head resting on a mass of molding leaves, and this was drawn aside and examined.

Here was the first real clue. A bit of paper, evidently a page from a scrap book, which showed faint traces of writing. Parts were entirely eaten away, and after a time the following words were deciphered:

"Escaped during the night miles wes
tains lyas have Rogers right
faithful
(Signed) roman"

The German letters contained no information, excepting the name "Johan," to which they were addressed, and were signed, "Matilda," all dated during the year 1911.

"One of these men was a white or Caucasian, and the other was, undoubtedly, an aborigine, as the skull formation clearly indicates. I am satisfied that this one was a native," remarked the Professor, after he had made an extended examination.

"This letter may be an interesting one to decipher," said Blakely, as he went over the contents again and again. "It seems to me that the part of the word 'lyas' has reference to the 'Illyas,' and 'tains' is part of the word 'mountains.' Probably, it would read, if properly reconstructed, 'west of the mountains.' "

"Yes, and the space between 'night' and 'miles' refers to the number of miles," added Ralph.

"It is remarkable that we should find evidences of the work of the Illyas at the extreme western part of the island, when they are living near the eastern border," remarked the Professor.

"I take it," answered Blakely, "that this letter was transmitted to the man here, and was written by some one, and conveyed, in all probability, by this native."

"That is a reasonable supposition. The word

'faithful' may have reference to him," responded the Professor, after some reflection.

"Well, we can do no more than give them a decent burial," said Blakely.

"It will be a difficult task to do that, as we have no tolls, and it would be necessary to carry the bones a distance in order to inter them. If the boys will gather up a quantity of stones we can make a covering for them against the wall, within one of the coves."

This suggestion was carried out, and the bones deposited beneath a mound, and after gathering up the various articles they descended the vine ladder and made a hurried trip to the river.

Unity was reached as it was growing dark to learn that two messengers from John had reached them during their absence, detailing the sighting of the Illyas' village, which was estimated to be five miles west of the mountains.

It was singular how this information seemed to supply the missing word in the mysterious message found with the skeleton on the hill. The Professor at once made a copy of the letter, and forwarded it by messenger to John. In the letter he detailed the information of the finding of the message, and he had hopes that they might be able to find some traces of the people mentioned in the letter.

While awaiting the return of Muro, John made a complete examination of the Illyas' village, encircling it to get its full position, and thus enable him to devise the best mode to attack, if it should be found necessary to do so.

He was astounded to note the character of the buildings. They had been the work of white men, it was evident.

Muro, with the boys, and the wagons came in sight before ten o'clock, to the intense relief of John. He suspected the cause of the delay.

"We had a lively brush with them, for a while," said Harry, "but we had no fear at any time."

"Harry is right about that, but I want to tell you we have a different class of fighters to deal with than anything we have experienced so far," added George. "Why our fire didn't seem to frighten them a bit, and they adopted the regular Indian plan of getting behind trees and brush."

"What kind of a town is that?" asked Harry, as he took the first glimpse of the place through the trees."

"Something different in that line, too, as well as in the fighting," answered John, as he smiled at the question.

"How big a town is it?" asked George.

"I judge, from its size, that there must be fully a thousand natives there, but they are keeping pretty close. Do you see the line of breastworks all around the place?"

The boys were astonished at what they saw. No wonder the other tribes hesitated to attack them.

The two warriors captured by Muro were brought before John, after he had made a survey of the place, and by the aid of Uraso one of them was instructed to carry information as to their intention to the Illyas.

This was to the effect that in the event no reply was received before noon no other effort would be made to open communications. It was distinctly impressed on the warrior that the Illyas must give up all the captives, and that an agreement must be entered into by them not to leave their own boundaries in the future, and John also offered protection and a safe return of any messenger who might be sent back with the answer.

The captive was released, and, bounding forward, was soon within the line of earthworks which surrounded the village. The message gave a full two hours for them to decide. There was not a sign of an Illyas until near the time limit, when the same one which conveyed their message was noticed approaching the line of the allies.

He came directly to John, and conveyed this information:

"The chiefs do not intend to do as the White Chief says. They are entitled to the captives, and intend to keep them. If the village is attacked the white chiefs and the tribes will be destroyed. We do not fear him and his fire weapons."

John motioned to the warrior to depart. For a moment he looked at John in amazement. Judging the actions of the white man by the ethics of the savage, such a message would have meant his death. He glanced around stealthily.

Uraso saw why he hesitated, and remarked to him: "You are free to go. No one will injure you, because the White Chief has given his word to protect you. He is not like the Illyas. He does not lie."

CHAPTER XIV

THE SURPRISE AND CAPTURE OF THE ILLYAS' STRONGHOLD

JOHN smiled, as he saw with what satisfaction Uraso gave him this parting shot. Still he hesitated.

Uraso went up to him, and he started back. "You need not fear me because we will keep our word. Say to your chiefs that Uraso tells them they are fools. The Illyas cannot succeed. They will be crushed and their villages taken. Your village is surrounded, and you cannot get aid from your other villages. Go and tell them that we shall not again ask them to treat with us."

This address assured him and he first marched along carefully, and soon made his way with celerity to the village. The Illyas were, unquestionably, as much surprised as the messenger at the treatment he had received. It was so unlike all former experiences.

During John's investigations he had discovered that the approach to the village on the east side offered the best chance for a rush, as the character of the ground was better suited to go up close to the line of works, and from that point a better view was obtained of the interior of the village.

A movement during the daytime would disclose his motives, and he therefore advised Uraso and Muro of his plans, and suggested that as they

would be able to mass the troops better during the night, the attack should be delayed until early morning.

"During the day we will make a great show of putting up a line of works to deceive them into the idea that we intend to attack from this side. During the early morning we will take three-fourths of the force and steal around to the east, and attack them with a rush."

"But suppose they rush out in this direction?" asked Muro.

"We must keep a sufficient force here to hold them in check, and, if necessary, to rush in from this quarter; and I would like to have you hold the ones left for that purpose."

Muro was delighted at the position assigned him, and thought he saw the slightest bit of feeling on the part of Uraso; but this was soon quelled when John took Uraso aside and said: "I want you with me, as you know how to handle and direct the men."

"I have no right to feel offended because you have given Muro this post. He is the best man."

"He is no better than you, but you are better than he for the position required when the charge is made."

This was, really, true. John knew the capacities of each. Muro was a better tactician, but Uraso had a much better hold on the affections of the warriors, and he was a fearless and intrepid fighter.

The boys could not help admiring the fine situ-

ation of the village, and the imposing appearance of the town.

"See that building facing this way? It has pillars different from the building to the left. Why do you suppose they made them unlike?" was George's query, as they sat in the wagon with John during the afternoon waiting for night to come.

"I suppose they wanted to put in the different kinds of architecture, simply as a freak, or for some other purpose that I have not yet settled in my mind. If I am not mistaken there are at least three different orders of architecture represented in the buildings. On the other side of the town you can see another building, somewhat smaller than the one to the left, which has still different columns."

"I imagine the one fronting us is the main building. What order does that belong to?"

"That is a Doric front. It had its origin in the log hut, which was called Dorus."

"How many kinds of architecture are there?"

"There are five distinct orders, as they are called."

"What are those besides the Doric?"

"The Ionic, the Corinthian, the Tuscan and the Composite."

"What is that building to the left?"

"That is distinctly Ionic."

"I don't see much difference from the Doric," remarked Harry.

"The distinction is very marked. The Ionic is

proportioned to the dimensions of a man, and has the delicacy of the human figure."

"Yes; I can see that now. Has the proportion anything to do with the order?"

"The Tuscan is distinguished by the fact that the column is usually made seven times the diameter of the lower part of the shaft in height."

"But I notice that the ones shown in the two buildings don't appear to be very much different in proportions."

"No, for the reason that the distinctive features between the Doric, Ionic and Corinthian pertain to the capitals. Notice how exceedingly simple the Doric is. I am sorry there are not other examples present, but I shall make some sketches to show the differences which are marked."

"I have heard more about the Corinthian than any other kind."

"That order is the most beautiful of all, and for that reason is so frequently referred to by writers. It is designed to represent the delicacy of a young girl. The capital is the most ornamental of all the orders, and it is also larger and much more showy."

"But you have not yet described the Composite."

"The Composite or Roman, is the Ionic grafted on the Corinthian. From this you will see that not only the general form, but also the proportion and the ornamentation, go to make up the various orders. To illustrate: The Ionic has, as one feature, two scroll-like ornaments, called volutes, and it has more moldings and is much more slender

than the Doric. To make the Composite there is borrowed the quarter round molding (A) from the Tuscan; the leaves (B) from the Corinthian, and the volutes (C) from the Ionic."

During the night all preparations were made for a quick transfer of the main force to the east.

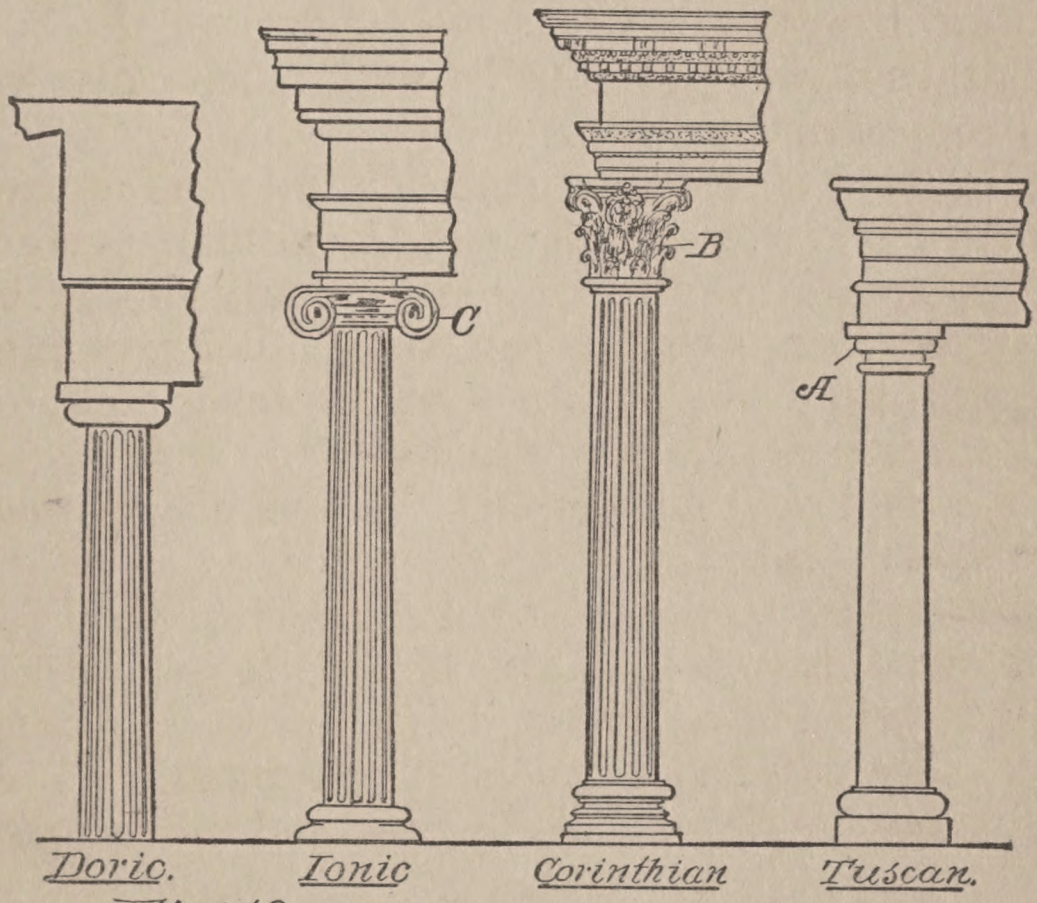


Fig. 19. Orders of Architecture.

Works were thrown up very ostentatiously during the afternoon, in their position on the west of the village, and it was obvious to the trained eye of John, who was constantly observing the movement in the village, that they were bringing the warriors to the side facing these preparations.

John, together with Muro and Uraso, crept up

close to the line of breastworks, during the night, and satisfied themselves the Illyas were deceived as to the point of attack.

Shortly before four in the morning the warriors marched out, making a wide detour to the right, and within an hour were close to the east line, and carefully concealed. The plan was for the men under Muro to commence the attack, as soon as it was light enough to see plainly, and the firing of four guns was to be the order for the rush on the part of the main force.

All awaited the signal with impatience. Soon the firing was heard, and instantaneously, as though expecting it, the Illyas were seen rushing through the village to the western line.

John gave the word. To approach close to the breastworks without firing a gun, and not to discharge a single piece until they were well within the fortified line.

The entire force moved forward at the shots. The line of entrenchments was reached, and John, with Uraso by his side, was the first to leap over. They halted fifty feet beyond the ridge, to allow the warriors to come in and form the line, those having the guns in front.

With a shout, the allies bounded forward, withholding their fire until the command should be given. The Illyas up to this time were principally arranged along the western wall, discharging their arrows at the force under Muro.

The appearance of the allies within the walls was such a terrible surprise that all semblance of

order was lost in their ranks. They began to scatter. Uraso shouted out in stentorian tones:

"Throw down your arms, or we will fire. Surrender and you will not be killed."

John and the front line were now alongside of the second building, the one described by him as having the columns of the Ionic order, which had interested the boys so much.

Notwithstanding the excitement of the moment, Harry could not help looking at the building with its tawdry and crumbling columns, and in doing so espied a half dozen peculiarly garbed Illyas rushing out and attempting to escape to the north along the narrow street.

Calling a dozen warriors, he, with George, made a rush after the escaping fugitives, and before the limit of the village was reached they were surrounded and carried back.

The Illyas warriors were now in a panic. There seemed to be no one to order a surrender or a retreat. John ordered Uraso to have his men spread out to prevent escape in either direction, and as he turned to execute the order, Harry and George returned with the prisoners.

At the sight of the captives Uraso shouted the order to his men, and quickly turning to John, who was slightly in the advance, cried out: "Here are the chief and his principal advisers."

John turned to look and noticed that they were surrounded by the men in charge of Harry and George.

"Good work," he said. "Demand that he tell

his men to surrender." And Uraso repeated the message.

The chief saw the situation, but refused to give the order.

"Then we shall have to kill them, and unless you surrender we shall attack at once."

He had hardly finished the words when Muro, seeing the condition of affairs, left their fortress, and rushing forward scaled the low entrenchments, directing a volley into the now thoroughly disorganized and excited warriors. The entire body of Illyas had seen the capture of their chiefs.

The appearance of the chiefs at the head of the column commanded by John made his position safe from attack. Whether the chief refused to comply with Uraso's demand from stubbornness, or because he was paralyzed at the sudden changes from his fancied security, was not apparent at the time.

The warriors now advanced with guns ready for a volley, and the chief saw that resistance was useless. He held up his hand as a signal. John rushed forward toward the oncoming warriors led by Muro, and the latter, seeing the chief in the hands of Uraso, ordered his men to halt.

Meanwhile the forces under Uraso had spread out and were approaching the halting warriors, who, one by one, threw down their bows, and, as they did so, were marched to the open central part of the village and surrounded by the men led by Muro on one side and Uraso on the other. John rushed back to the cordon surrounding the chiefs.

Up to this time not the sign of a woman or a child had been seen. But when order was finally restored and the defenseless warriors were herded together as compactly as possible, the huts surrounding the main buildings were opened, as by magic, and the women poured forth wailing and shrieking.

It was bedlam let loose. They pictured all the terrors of captivity. They knew what it meant. They passed around the cordon beating their breasts, and shrieking like demoniacs. John, motioning to Muro and Uraso, stepped aside, and ordered the chiefs to follow.

"This is the building they came out of," said George quietly to John.

"Then it will be a good place to hold the conference. Uraso, instruct your men not to allow anyone to leave his place within the circle, and then attend the conference with us."

The guards followed John as he entered the building. The boys were eager to see the interior. Once within they saw a dozen women and twice that number of children huddled together in one of the rooms. The entrance from the main door in front led directly into a hall, and at the rear end of the hall was a large room the entire width of the building.

Several smaller rooms were on each side of the hall. It was, to all appearance, arranged like an American or European dwelling, the entire interior being finished in wood, but in a terribly dilapidated condition.

The surprise was still greater when they found in the interior of the great room a number of articles of furniture, such as chairs, tables, settees, and articles which, in their younger days, might have been rugs. Parts of bedsteads were littered around, broken articles of furniture were scattered here and there, and everywhere the place was lavish with dirt.

The boys had seen many native places where filth had accumulated, but the atmosphere seemed to fairly reek. It appeared so to the boys, who had lived so much in the open, and who had such vivid imaginations that the wrecked condition of the interior suggested a worse atmosphere than there really was.

It was not close or confined, that was certain; for the places which once, evidently, had windows, did not contain even the suggestion of glass. It was one mass of broken, misplaced, jumbled up belongings, that would require the rebus manager of a magazine to assemble in order.

When Uraso returned, and the chiefs were placed before them, the boys had an opportunity to study the famous chief of the Illyas. They took occasion to compare him with the others, for the boys now knew all of them.

He was a man, probably sixty years of age, with the most curious headdress, which was worked to imitate, somewhat, the crown, to which his position entitled him. He wore a brightly colored mantle, if it could be called such, for it was simply thrown over one shoulder, and its pendant

ends were bound to the waist by a wide girdle.

He wore short trousers, or pantalets, and Harry could hardly keep from laughing, as George suggested that he was ultra-English in the way his trousers were rolled up. He had the face of a man of authority. His every action and look betokened one who knew his authority, and the first question, together with the imperious manner of uttering it, indicated that he was a king, and he knew it.

He looked at Uraso and Muro, both chiefs, and equal to him in rank. He did it with such an imperious air as plainly indicated that he considered them his inferiors. Uraso and Muro stood there, with arms folded, dignified, and returned his gaze with a dignity that won the admiration of the boys.

"I wonder how Uraso and Muro feel now, when they have that old devil at their mercy?" George whispered to Harry.

When the circle had been arranged the chief, Oroto, addressed John in this terse manner:

"What do you want?"

The question came like a shot. It was the first word he had said. Neither of the others had asked for information, nor had they deigned to notice him, as they were marching to the council chamber. This neglect on the part of Muro and Uraso may have nettled him. The attitude of the chiefs plainly irritated him.

It is well known that people of this kind are very sensitive to slights, or what they consider so. It is just as likely that the two chiefs purposely neglected him in that manner to make the humiliation the more complete.

CHAPTER XV

THE RESCUE OF FIVE CAPTIVES

THE question for the moment nettled John. Here was a prisoner, powerless in his hands, imperiously demanding of his captors what they wanted. It may not have occurred to him that such a question was out of place.

John drew himself up, and with that piercing glance which he could give, leaned forward, and slowly, but with terrible emphasis, answered: "Nothing."

It was now the chief's turn to show a look of surprise. He looked at John, and his eyes wandered to Uraso and Muro. Neither indicated the slightest curiosity at the answer. Not another word was said as John kept his eye on the chief.

Then seeing that he had a different kind of creature to deal with than any he had heretofore met, addressed John in an entirely different tone of voice:

"Why have you captured me and my warriors, and why do you intend to destroy my village and take my women and children?"

"Because that is what you have been doing all your life. We do not ask you to give us anything. We have taken everything you have and shall not ask you for permission in anything we do. We have no desire to injure you or your people, and whether we shall do so will depend on your ac-

tion. If you will give us certain information it may make it easier for you, but if you do not tell us it will go hard with you."

"I am ready to listen."

"Did you receive the messenger I sent you three days ago?"

"Yes."

"What did he tell you?"

"That you intended to kill me and my people."

"Did he not tell you that we did not want war, but peace, but that you must give up the captives you had?"

"No."

"Send out for that warrior," John ordered, as he glanced at Oroto.

Muro accompanied one of the sub-chiefs, and in a few moments returned with him. He came in with face hanging down.

He was placed before John. "Why did you lie to the chief?"

The savage was mute. He cast an appealing glance at his chief, but the latter did not notice him.

Addressing Uraso, John said: "Take this man out and beat him. He must be punished for lying."

George called in several of the warriors, who were instructed to carry out the decree. In the meantime Uraso called John aside, and stated that the poor fellow had undoubtedly told the truth, but the chief had lied.

"I suspected that," answered John. "I do not want the man beaten, so that you may go and

stop the execution of it, but do not let the chief know that the order was not carried out."

"Did you get a second message from me yesterday through one of your own warriors?"

"Yes."

"What did he tell you?"

"He said that you had declared war against me and my people and would kill all of us and take our women and children into captivity."

"Did he not tell you that we came to make terms of friendship, and that all we wanted was the captives which you wrongfully held?"

"No."

"Bring in that warrior."

Uraso went out with one of the sub-chiefs, and when he appeared addressed him sharply:

"Why did you lie to your chief, and not tell him what I told you? Answer me."

The chief merely glanced at the wretch, and the latter bowed his head. The question was repeated, and he was told that he would be protected against the fury of his chief if he would tell the truth. As he was about to reply the chief merely glanced at him, and his lips were sealed.

"Take him out and beat him as severely as you have beaten the other. These people must be taught to learn that they should not lie."

Uraso understood John's look, and acted accordingly. He was taken out, but was not beaten.

Turning to the chief, and acting on the information imparted by Uraso, he startled Oroto by the following question:

"Why did you lie to me and allow your warriors to be beaten?"

The question stunned him for a moment. John did not permit him time to frame an excuse.

"You lied to me when you stated that they had told you the things you said, and I know it. You are deserving of the same punishment as those who were wrongfully beaten. Take him out and see that he is punished as he deserves."

This judgment against the august one was like a death pall on the ears of the sub-chiefs. The chief trembled; his footsteps, theretofore so supple, were trembling, and he held out his hands for support.

The enormity of this punishment to a chief by whipping is the most disgraceful thing that can happen. The person of a chief must not be defiled by a rod, which is intended only for children and for offenses committed by the unruly members of a tribe.

The procession filed out, and John hurriedly called Uraso and Muro to his side, explaining in a whisper that they should intercede to prevent the punishment.

The excitement of the surrounded warriors was intense, as the word was circulated that their great chief had judgment pronounced against him, and was to be publicly whipped.

As they were proceeding across the open space, Uraso and Muro, in well simulated tones, begged that John should forego the punishment, but he refused to comply until they had reached the place selected.

John advanced to him and said: "Your friends, Muro and Saboro, have begged me not to inflict the punishment for lying; I have decided not to do so at this time, as I am guided by their judgment, and I know they are wise. Instead, you and your chiefs must come with me and see the Great White Chief, and he may order that you shall not be punished."

This statement that he was not the Great White Chief was another piece of news that he could not understand.

"And now, I want to know where you have the captives?"

He hesitated. He looked at Muro and Uraso in a different manner this time. Uraso quietly spoke to him: "You cannot escape the vigilance of the white man. The wonderful fire guns can kill all of your people. You do not know what you are doing in trying to resist him. If you do not tell him he will find them, and then I cannot plead for you."

The chief, turning to one of the sub-chiefs, said: "Sama will take you to them."

The boys jumped as they learned the import of these words. They looked at John. The latter turned to the chief and said:

"How far are they from this place?"

The distance was indicated by signs, which Uraso interpreted to mean two hours.

"Bring in the wagons at once, and unload one of them; then take the other, with twenty-five men well armed, and carry Sama with you. The poor fellows are not, probably, in a condition to

walk." Then, again turning to the chief, he asked: "How many prisoners have you?"

He held up his hand with fingers outstretched, indicating five. There was no delay in preparing the wagon, and Jack and Jill, the two old trustworthies, were hustled along, to show the path of freedom to some of the boys' former companions and associates.

John's last injunction was: "Be sure and take plenty of food along." The order was unnecessary. The boys had thought of this, and the wagon held precious little but articles of comfort for the unfortunates.

Sama directed the wagon to the north, and Muro's son Lolo accompanied them on the journey.

"Do you know," said Harry, "we are going straight toward the Cataract?"

"I had quite forgotten that," answered George. "How I would like to go back again to the dear old place!"

"I have just been thinking, what a wonderful life we have had since we landed here. We had nothing when we came, and now we have everything!"

"Yes," answered George; and he stopped, while his eyes took on a blurry feeling, and the lashes began to blink at an alarming rate. "All but home!"

Harry looked at George. There was an infection, which he caught.

"Of course; I mean that, too. But we haven't lost them. When this business here is settled we

are to go to work on the big vessel. When I think of that it eases my mind."

"That is the great comfort to me, too. It makes me happy when I think of the joy we are bringing to the people here. I really love every foot of this island. It has been a wonderful experience to us."

"And," responded Harry, "to think that we have aided in restoring so many to freedom; John and Blakely, and the four boys, and—I wonder who the ones are that we are going after now?"

"That is what I have been thinking about all along. But did you ever see such bricks as Uraso and Muro?"

Lolo had learned many things in the short ten days that he had been with them. The boys had attained a remarkable knowledge of the language, and Lolo was a constant instructor for them. He was so simple and unaffected in his ways that they grew to love him.

Within two hours the location of the village was sighted. It was distinctly noticed among the trees, perched on a hillside, and the excitement of the boys was intense. Stut was in charge of the warriors.

Before the village was reached several warriors belonging to the Illyas appeared, but fell back when they saw what was approaching. Stut directed Sama to inform them that they had come at the command of Oroto.

This information did not satisfy them, but the wagon did not stop. As it moved up the incline, the warriors lined up, fully twenty of them, won-

dering what the strange visit meant. There was no act of hostility apparent, still they could not understand why there were no Illyas present except Sama.

"Take us direct to the captives," commanded Stut.

Sama knew where they were. A typical native hut, but much larger than the others, stood behind the main homes of the village. To that the wagon was directed.

The warriors on Stut's command lined up behind the wagon, and the boys, accompanied by Lolo, rushed for the door. It was but the work of a moment to wrench the bars away, and without waiting for any ceremony George and Harry were inside.

The scene that met their eyes was appalling. The five captives were in a pitiful state. Two of the three boys were lying on filthy hay, and one man, also badly emaciated, was on the other side, lying down.

The boy who was still on his feet rushed to Harry and threw his arms about him. "Is that you, Harry? Thank God! And George, too. Where did you come from?"

"Who is this?" came like a moan from one of the boys. George stooped down. "Harry, here is Robert—Robert Lamson; and who are you?" And he crawled on his knees over to the other, who feebly turned his eyes.

Lamson turned to Harry, who was now on his knees. "You know Min, don't you?" Min was

the nickname of one of the boys, because of his diminutive size.

"Poor Min!" said Harry, as he put his arm around him. "We will get you out of this at once."

"But we are so hungry," cried Robert, as the tears streamed down his face.

The boys were all crying now. The tears streaked their faces. Lolo was very much affected, but he was a jewel in this emergency. He called to Stut, and together they carried out Robert, and Harry, with his strong arms, lifted Min as though he was a feather.

They were carried to the wagon, and tenderly laid on the clean, sweet hay. Poor Min had fainted with the excitement, and Robert was not much better. But who were the men?

When Harry returned to the hut he found the warriors around one of the men, talking excitedly. He was a Saboro, and Stut recognized him as one of his people, who, it was believed, had been sacrificed long before. The other was a white man, and he was lying in a sort of stupor, apparently not recognizing his visitors.

Harry spoke to him, and at the strange voice he turned his head, and with an effort raised himself. "Who is this? What do you want? Is that you, Rogers?" and he fell back exhausted.

The still active boy, Roy Whitten, came up, and said: "He was here when we were brought to the place. His name is Gustave Wright. He has a wonderful story to tell."

"What is the matter with him? Was he wounded?"

"Yes; but he is over that now. The trouble is that he is starved, like the rest of us. Can't we have something to eat?"

"George is getting it ready for you. You must eat sparingly at first. George will attend to that, never mind."

The Saboro was in better physical condition than the others of the party. There was no time for talk. The captives were fed sparingly. "Oh, how good this tastes!" said Robert. "We had given up all hope, after they brought us here. We tried so hard to get away and go to the northeast side of the island, where some white people are living."

Harry dragged Robert out of the hut, and called to George. "Here, George, did you hear what he said? How did you know there were white people in the northeast part of the island?"

"We saw it on a litter, which the Illyas brought into their other village."

Harry looked at George. "That was the litter we made at the Cataract, and on which we carried out the Kurabu. I wonder how the Illyas got hold of it?"

"Where is the Cataract?" asked Robert.

"That is at the northeast part of the island. That was our home."

"But don't you live there now?"

"No; we live in a big town at the southwest part of the island."

"But this is so wonderful to us. Just you two

boys, and all the savages. How did you manage it?"

"But we are not alone. The Professor has been with us, and we have Mr. Varney, and we rescued a Mr. Blakely, and four of the *Investigator's* boys."

"The Professor—the Professor, and Varney? Rogers spoke about Varney. Do you mean the professor of philosophy that you used to be so chummy with?"

"Yes," answered Harry, eagerly. "But let us get busy now." Stut had rounded up the warriors, and through Sama informed them that they were wanted at the village.

The women were in consternation, but Stut informed them that no harm would befall the men. Up to this time Stut had not permitted Sama to give any information about the situation at the village, but he now turned to the waiting warriors, and said:

"The Great White Chief and all the tribes have united, and have taken the Illyas chief and all his people prisoners, and all their women and children are now captives. The Illyas have not acted right and the chiefs must now go to the Great Chief and show that he is sorry, and that he will not again try to take captives, and will not make sacrifices."

Without waiting for a moment, the train started back for the Illyas' village. It is wonderful how the stimulating influence of surroundings will build up and strengthen the depressed. The poor boys, emaciated as they were, had smiles and tears,

as they heard little snatches of experiences from the boys.

"We are telling you these things, but we are simply crazy to hear your stories. But they will keep. Let us do the talking now. You will be all right in a day or two."

The boys' eyes were kept on the vessels containing the food. Time and again George would shake his head as one or the other tried to get another "bite." The liquid food was the first administered. The journey back took much longer, because Harry would not hurry the animals over the rough roads with the patients in their low condition.

When the wagon and the train of warriors arrived at the village, the only thing the boys saw were the warriors of the allies. The captives were in the buildings, and were guarded on all sides.

CHAPTER XVI

REMARKABLE GROWTH OF UNITY

"We haven't heard from John for two days. I wonder if they have met with any difficulties?" asked Will, as they were together the evening after their trip to the hill and forest.

"John is very prudent, and a man of very extensive knowledge as a campaigner. If they had met any disaster we should have known of it before this."

"We ought to have had a telegraph line. That would keep us in touch with the army," added Jim.

"Wireless telegraphy would be still better," responded Tom.

"But how about wireless telephones?"

"And if wireless telephones, why not wireless power?"

The Professor smiled, as one suggestion after the other was made. The other boys smiled, too, at Jim's last suggestion that power might be transmitted by wireless.

"That is going a little too far," said Will. "I can understand why sounds can be sent, but power is another thing, it seems to me."

"I am afraid that is not a very logical conclusion," interposed the Professor. "What is the difference between sound and power?"

"I should say that sound is a motion in the air," replied Will, "and that power is motion——"

"In the air, too," continued the Professor. "That is not a very good definition of the matter. Let us try and make it clear. Sound is produced by vibration; the lowest number of vibrations the ear can distinguish, is sixteen per second, which is known as the low bass notes of an organ. The highest are, approximately, 12,000 per second. These vibrations require power to produce them."

"Do you mean to say that all vibrations require power?"

"Yes; nature speaks to us only in the form of motion, or vibrations of some sort. Light, heat, electricity, are merely different forms of motion. Taste and smell, as well as sound, are merely modes of motion. The beating heart; the winking of the eyelids; the rhythmic breathing of the body; the swinging of the pendulum; the movement of the sap in trees and the unfolding of the leaves; the light mists which go up and the rains which bring the particles back again; the winds and the waves; and the giant swings of the planets through space, all show how nature performs her work through unceasing movement; and all these require power."

"I remember," remarked Ralph, "about reading of a Hindoo fakir in India, who claimed that he could bring to him an object ten thousand miles away, in ten minutes of time. As that was motion it must have taken considerable power to do it."

"That is easily determined," answered the Pro-

fessor. "Ten thousand miles would be 16.6 miles per second, at that velocity. If the article should be only one inch square it would take 18,000,000 horsepower to transport it that distance in the time given. This calculation is sufficient to show the absurdity of the Hindoo's statement."

Considering that the new community was one which had been recruited from a people which had no ambition in life, except merely to live, the work going on in every quarter was more remarkable every day. Tom came to the Professor and remarked: "It would do you good to go down on street B and see how the Saboros have fixed up their places."

This was a sufficient hint for him, and busy as he was, he sauntered in that direction.

What he saw was, really, a surprise. Taking the hint from the sodding operation which the women had noticed around the boys' quarters, he found that they had actually borrowed the wheelbarrows and made some nice lawns.

The Professor called in at the places, and congratulated them on the beautiful appearances, and the nice manner in which the work was done. What a wonderful thing that was to those poor women, to see the Great Chief take such notice of their work.

He went into the cottages, and examined every room, and suggested many changes, and offered advice in the manner of keeping the houses clean, and in taking care of the children. This work of beautifying their homes was, of course, crude, but it had a remarkable stimulus to the others.

On every hand this was taken up. It was a spirit of emulation that was worth encouraging.

When John left with the forces, the Professor consulted Blakely, and ordered the erection of three larger and more pretentious cottages. Each of these had five rooms, all plain, but arranged in good taste, and the furniture was also being made, and the large number employed enabled them to complete the buildings ready for furnishing before John's party returned.

The working force was now ready to put up a still larger building. "Do you know what this is for?" asked Ralph, as the timber was being taken to the new location.

"I suppose this is to be the Town Hall," replied Will.

"No, indeed; it is the schoolhouse." And the boys laughed at the idea. But it was an idea that was well considered and determined on, long before John left on the expedition.

But the town was growing beyond all comprehension. Daily new families arrived, and Blakely was the busiest man in the place, in his efforts to find work for them, while the Professor and the boys were often at their wits' end to know how and where they would house them. The Saboros were the most numerous, followed by the Berees and Osagas. But now the Kurabus were coming in—the families of the warriors with John.

The Chief Oroto saw and marveled at the sights. During the entire time he had been there, he had never suggested the idea of returning. The Kurabu medicine men who had been brought down

with him, were still under the charge of the Professor, and one day one of them accosted Ralph in broken English.

He looked up in surprise. It was the first inkling that the so-called wise men were being taught the language. Ralph had quite a conversation with him, and reported the information to the boys.

How was this change brought about? The first step of the Professor was to show the wise (?) men some of the mysterious things which the white men could do. The battery, which the boys had made at Cataract, was one of the instruments. Then he showed them the simple experiments in chemistry; how ores were treated and metals extracted and tempered.

These things were so much more important and wonderful than anything they could do or ever dreamed of, that when he told them they could do those things, he had the most willing pupils. Hour after hour they would perform some task, until they began to crave for new things. Then began the work of instilling knowledge of the language as a part of their education. They were taught how to communicate ideas by signs in the English language, and thus the alphabet was taught.

A spirit of rivalry was exhibited among them, and it was so intense that they had no further time for idleness or useless wanderings about the place. It was no wonder that the boys saw so little of them when the spirit once took possession of their energies.

Two of the men referred to had an undoubted aptitude for chemical experiments, one of them, Talala, being exceptionally bright and quick to grasp the meaning of an experiment. He usually accompanied the Professor on all his rounds visiting the sick, because this was now an imperative daily task on his part.

The thermometer was in frequent use and Talala understood its meaning. Only the simplest remedies were used and administered, and the gathering of the vegtables necessary for the making up of the remedies was a part of the work of each. In this the natives had a pretty good knowledge, but they knew nothing of making the extracts, or how to concentrate the compounds.

Cinchona, the Peruvian bark, and calisaya, its sister, which furnish the quinine of commerce, were well known to them, but they did not know how the white man made it so more efficient than the crude product as used by them.

He explained that by the use of an acid, like that furnished by surphur, a chemical change could be produced, whereby a single grain would be more efficient than a dozen grains in the way they used it. This was labeled "Sulphate of Quinine," and so on along the whole line of remedies, he gave a term which they learned, and the reasons for it.

When John saw the wagon approaching he rushed out, followed by Uraso and Muro. The rescued captives were in the wagon. Pending their arrival a number of the warriors had cleaned out the large building—the one with the Doric

columns, which stood at right angles to the chief's house. This structure appeared to be in the best state of preservation.

Another lot of the warriors took the wagon, and with their bolos gathered a large quantity of the sweet grass from the hillside, and this was brought to the building and arranged for the use of the chiefs and John, and for the boys when they returned.

George was eager to tell of their adventure, and of the prisoners they had brought with them. "We got three of the boys, but two of them are very weak. We have a friend of yours, also."

"Who is it?" exclaimed John, just as eager as the boys could be.

"Wright; Gustave Wright."

John bounded into the wagon. Wright saw John, and feebly extended his hand.

"I knew I would find you sooner or later," said John, as he put his arm around him. "But we got you soon enough to save you. All you need is something good to eat." And Wright smiled.

"Yes," he answered. "They haven't permitted me to take much so far; but I guess they are all right. What a fine set of boys you have!"

"The finest in the world. Wait until you know them! But never mind about talking now. And these are the boys? Poor fellows! What an experience they must have had! Come on, men; get them out and make them as comfortable as possible."

There were willing hands for every job. Muro was delighted at the rescue of his friend. He was

one of the most skillful and powerful warriors, but he did not look like it at this time.

Inside the patients were ranged about the place, and the cooking stove brought in from the wagon.

"I suppose I shall have to take charge of the kitchen," said George, as he ordered it arranged in place and directed them where to put the various articles. Before long the savory odor of the vegetables and game reached the famished ones, and they begged for some of it.

"A little at a time," said George, soothingly. "I am doctor and cook, and there is plenty here, of the best kind."

"Oh, doesn't that smell good!" exclaimed Min, joyously.

"That's the way I like to hear you talk," said Harry. "Your voice doesn't seem starved. You'll be out in a couple of days, and be better than ever."

"How long have you been in that place?" asked John.

"In that particular place, only about a month; but we were in a worse place, still farther south, for about three months."

"Starving all the time?"

"Yes."

"I was moved to say that starving is a good thing, in its way, but it has its limits, and four months is a little too long for either comfort or health. You will find, however," continued John, "that you will be much healthier for the experience, particularly if you have ever had stomach

troubles, as my friend Wright here has had all his life. Isn't that so, Wright?"

"Do you think I have been to a health cure?" he asked.

"Certainly; the best kind, for one in your condition." And John laughed.

"Probably you took me away before the cure was effected; but as I always was magnanimous, I shall forgive you this time."

There was a continuous fire of conversation, which cheered the patients, and added greatly to their store of knowledge.

Harry, who had been outside, rushed in, and exclaimed excitedly:

"Did you have *Investigator's* Lifeboat No. 3?"

"Yes," exclaimed the boys.

"Who wrote the note we found in it?"

"Did you find our boat? Where did you get it?" asked Robert.

"We found it on a river to the north of this place."

"How in the world did it ever get there?"

"But who wrote the note?"

"What note?"

"The message signed Will."

The boys looked at each other, as they all shook their heads.

"That is one of the mysteries which George and I thought you could solve."

"Mysteries! Did you have many of them?"

"Many of them! We had over a dozen, and some of them are still on the puzzle board. Do you remember Raggy, the drawing teacher? He

always liked to call some of our drawings the unsolved puzzles. I wonder where he is? We had enough mysteries the first three months to supply headaches for a year."

"We want to know about them."

"We'll tell you all about them; and some were mighty thrilling. We had some just as exciting as any you ever read of in the last boys' series that we had about two years ago."

"You see," said George, in a sage-like tone, "Harry and I don't read books of that kind any more; we simply act them." And the boys, and men, too, laughed at this sally.

"Stop your talking for a while and eat something," continued George.

"Good, but it's awful hot," said Min, as he puckered up his mouth and drew in a breath of cool air.

"I made it hot so you wouldn't eat too fast," chuckled George.

Just then a great commotion was heard on the outside, and George, Harry and Robert rushed for the door. Beyond the village a scrimmage was taking place, and a few shots were fired.

John and Uraso were racing across the open place, and dozens of warriors were following. Muro was seen as he emerged from the combatants, and he was smiling as John came up.

"The reinforcements from the south village came too late. I suspected they would be here, and I had a number of the men in wait for them. They have captured all of them."

John nodded his head with approval at the

course of Muro. The warriors brought in the prisoners, who were astounded at the unexpected welcome which awaited them. Forty-five were in the party. They were put under guard with the others.

The utmost care was observed during the night, as the Illyas were known to be very foxy, and half the force was detailed to keep guard.

Early in the morning John's first care was to make an investigation as to the character of the provisions on hand, and to arrange that foraging parties should be sent out to bring in vegetables.

He was surprised to learn that the Illyas cultivated many kinds of garden products, and fruit was growing in abundance. This was found to be a prudent thing to consider, when it will be remembered that the village now had to feed over three hundred of the allies, and that the penned-up Illyas were not in a position to go out and bring in the daily supply.

The boys were fed at intervals during the night, but before four they all felt so much restored that sleep overtook them, and John advised them to permit sleep, as that would be the best restorer, and they were not disturbed until they naturally awoke during the forenoon.

A plentiful supply of broth was prepared, and administered during the day. But Harry and George were simply wild to explore the buildings. The excitement had been too intense to enable them to give it much thought. But now something must be known about the buildings and the reason for their erection at that place.

John had questioned various ones about the buildings, but none seemed to know anything concerning them. Uraso and Muro were just as much surprised as the whites. Neither had known of the existence of a place with such buildings.

It appears that the Illyas never allowed captives to be confined in the village, and this was a wise thing; because the escape of anyone would be sure to inform the other tribes of the existence of the Forbidden City.

The remarkable thing about it, aside from the buildings, was the plan upon which the town had been built. It was regularly laid out. There were three main buildings; the first and largest being the one facing the west, with the Doric front. The next largest had its front facing the south, and this had Ionic columns. The third, and which was not noticeable from a position west of the village, was smaller than either, with a front of Tuscan architecture.

What did these buildings mean? By whom were they erected, and for what purpose were they intended? These were questions ever uppermost in the minds of John and the boys.

CHAPTER XVII

THE MYSTERIOUS CAVE. RETURNING TO UNITY

"It may be there are some sort of records or tablets somewhere about the buildings which will indicate what they were erected for; but my investigations thus far leave me just as much in the dark as when I first saw them," remarked John, as they were examining the structures.

"I wonder if they have corner stones? Sometimes they put records there," observed Harry.

"I made an examination in that direction also, but the character of the underpinning is the same all around, and the corners have no distinguishing stones."

"It must be a very old custom to have cornerstones for buildings."

"It was a custom to have cornerstones, or memorial stones, in all buildings in ancient times. They were well known in the time of Job, and buildings thousands of years prior to his day contained them. It is not known from what the custom arose."

"Didn't you say that the treasure charts showed the existence of caves to the southeast of the cave we found at the Tuolos' village?"

"Yes, and that is something that we shall have to investigate to-morrow. To-day the patients still need our care, but they will be well enough to enable us to be absent to-morrow."

"I think we ought to make sketches of the plan of this town. I have a presentiment that we shall know something more about this place in the future," said George.

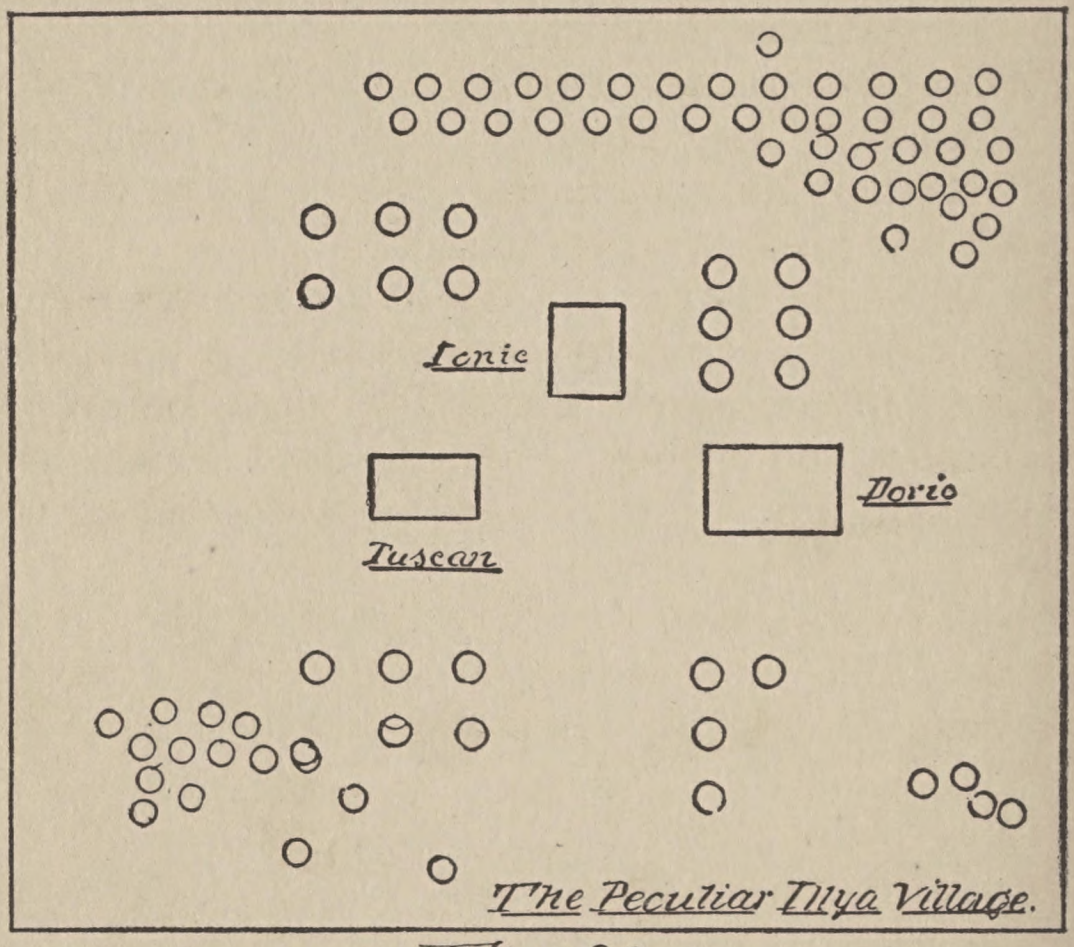


Fig. 20.

"By all means have it prepared during the day. Later on I may be able to give a pretty good guess what all this means." And the boys looked at each other significantly.

If the chiefs, or any of the lower order, knew anything about the origin of the town, they did not make it apparent.

"Do you notice one singular thing about this town and the people in it?" asked John.

Neither of the boys could guess.

"Where are the medicine men, and those who perform the sacred rites at their festivals?"

The boys again looked at each other for an answer. George replied: "I think they are at the caves of which the charts give some indication," finally exclaimed Harry.

"That is the case, undoubtedly. That is where we shall have the difficulty. The chiefs will not disclose their hiding places. Before going on the search we must question the chief."

In the early morning John and the boys called on the chief in company with Uraso. A complete change had come over him. Two days before he was sullen and moody, after the first lesson had been given him. Now he was different and agreeable.

"Before we start for the village of the Great White Chief there are some questions I would ask you. How many medicine men have you?"

"Ten."

"Where are they?"

"In their dark homes."

"Where are those homes?"

"To the east. Sama will take you to them, but you cannot go in."

"Why not?"

"Because you will be destroyed."

"How do you know?"

"Because they have told us so."

"Do you believe them?"

"Yes."

"Do you sacrifice your captives because they tell you the Great Spirit demands it?"

"Yes."

"Then I must tell you that they lie to you." The Great Spirit does not tell them to sacrifice. It is not death to enter their homes."

"But we know that no one has ever come from them alive."

"Does the Great Spirit kill them when they go in?"

"Yes."

"Do you want to know whether they tell the truth?"

"Yes."

"Then I will go in, and show you that the Great Spirit will not harm me."

"How shall I know that you go in?"

"You must go with me and stand at the opening."

The chief's eyes now wandered about. He was visibly affected at this bold declaration, and John saw hesitation in his demeanor.

Without giving him time to waver, he continued: "The great Chief Oroto must not show his people that he is afraid. He must show them that he is greater and wiser than the medicine men, and that the wise men who have told him those tales have not told the truth."

Turning to Uraso he said: "Prepare the wagon, and we will start at once." The chief and two of the sub-chiefs were taken out and placed in the wagon. Harry, George, Uraso and Muro, with a picked company of twenty-five men, were selected to accompany them.

The wagon was a curiosity to Oroto. He enjoyed the ride immensely and admired the manner in which Harry handled and guided the yaks.

Their course was directed due east for a mile,

and then moved along a well-beaten path diagonally up the hill in a southern direction. After proceding thus for a half mile farther the ground became rough and cut up by innumerable gullies.

"How much farther must be go?"

"To the place where the great trees are." And he pointed to a group of trees less than five hundred feet beyond. Progress with the team was impossible, and all alighted. Leaving three of the warriors with the team, the others ascended the slight elevation, and before them was the mouth of the cavern.

The opening was not more than eight feet in height, and not over six feet wide, with irregular sides. Arriving in front of it, John advanced to Oroto, and said: "I am about to show you that the Great Spirit will not injure me!" And saying so boldly marched in.

He remained for a full half hour, and the chief became uneasy. The boys, as well as Uraso and Muro, affected not to be disturbed. What John did was this: It was evident to him that the occupants of the cave had no knowledge of the approach of the party.

They knew that the White Chief and the allies had captured the village and the chiefs. They felt a certain sense of security in their home, because in all the tribal warfares the medicine men and the wise men of the tribes were regarded with fear and reverence.

When John entered the cave, he went in a sufficient distance to be surrounded by total darkness. He remained concealed long enough so that he could become accustomed to the darkness, and

slowly moved toward the interior, as he felt assured the occupants' presence would sooner or later be revealed by their lights.

In this he was not mistaken, and he was surprised to find them much nearer the entrance than he anticipated. It would be more impressive to remain for some time than to emerge at once, so he sat down to observe the wise men.

There was the most oppressive silence when he first observed the light, but as he neared them, a more or less animated conversation took place. Much of this was understood by John, as his knowledge of two of the dialects gave him some key to the words uttered. From this it was evident that they knew of the rescue of the captives.

The chief had told them of ten belonging to the order. John could count only eight. Possibly two were in some other part of the cavern, and he moved along at the opposite side of the large chamber to discover what was beyond.

Brushing along the wall, a hanging stalactite was dislodged, and it fell. The noise did not give even a momentary start to the company. John was surprised. He stopped and reflected, and the reason soon became plain. They supposed that it was caused by the absent ones returning.

But John waited and the two did not return, and they began to glance about. At this time he was on the opposite side of the chamber, so that the medicine men were between him and the mouth of the cave.

A half dozen of them had arisen, and John stepped forward with his gun in position. In a stentorian voice John shouted:

"I am the Great White Chief. Go to the door of the cave. If any refuse he will die. Go!"

It might be stated that before leaving for the cave Uraso had fully instructed John how to use the above phrases. His sudden apparition on the side opposite the mouth of the cave was most startling to them. Not a word was uttered by either.

"Go!" again shouted John. They seemed to be paralyzed. By a common impulse they moved toward the entrance, and as they marched out and saw the party there waiting to receive them, together with their own chief, the consternation was most marked on the faces of all.

Addressing the chief, John said: "Here are your wise men. The Great Spirit is not there. They have lied to you."

It was now apparent from the actions of the chief why he was considered such a power and a terror to his own people and to the tribes. He was every inch a chief. He strode forward, and would have crushed them with his own hands, but John interposed.

"We shall take care of them. They will never again lie to the great chief Oroto." And so saying they were ordered bound, and Uraso instructed to take them to the village and carefully guard them.

"You may take the wagon with you, Uraso, as the boys and I want to attend to some matters on our own account, and we shall soon follow you."

When the cavalcade passed from their sight, John said: "I suppose we shall now have an opportunity to examine the place. Have you any candles?"

Harry had not forgotten them, and the boys smiled as John also drew forth several, and thus they entered the cave. John marched direct to the place where the wise men had their quarters, and their lamps were still burning.

"By the way, we came in too soon. Two of them are outside, or are somewhere in the cave. We want them as well as the others. If they find us here, they will be likely to get away. But we are here now, and we must find out what we can, and as quickly as possible." The lights at the habitable part of the cave were left burning and the three plunged into the passageway which led to the east.

"This is the cave noted in the chart. How fortunate it is. You will note that this, like the other cave, has also a cross-shaped formation, and the treasure should be at the south branch."

"Here it is," whispered George.

"What, the treasure?" was Harry's eager question.

"No; the south branch."

"You are undoubtedly right. There is no other opening."

This branch was followed less than a hundred feet, when a solid white wall appeared in front, and it was readily seen that the channel terminated in the chamber.

The floor of this chamber was one mass of uneven projections, entirely unlike the other parts of the cave, and what was more singular still, it was fully six feet higher than the floors of the other portions, but it was absolutely devoid of

any treasure, or anything which could contain such a hoard as the chart seemed to indicate.

"It is just as well," said John, resignedly. "I suppose we have enough for our purposes."

While crawling down the rough portion which formed the elevated floor of the chamber Harry slipped, and broke off a portion of the stalagmite overlaying the side. It was dark beneath.

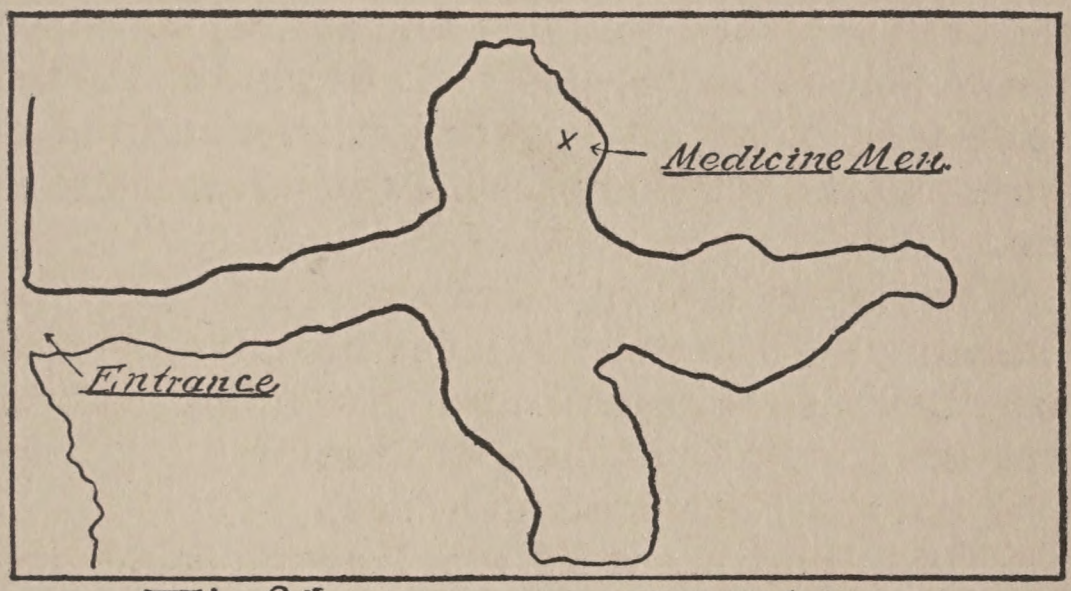


Fig. 21 Diagram of Cross-shaped Cave.

"This is not calcareous matter," exclaimed John.

"What is it?" asked both in a breath.

The lights were concentrated on a sample, and as John raised his head he looked at the boys, and slowly uttered one word:

"Copper!"

The boys did not at first grasp the true significance of the word. It was marvelous to them that copper should be found there, but John thought of something else. It offered a possible explanation to the origin of the buildings. Where were

the mines? Were they in the cave itself? This was not copper ore. It was a partly refined product.

It was evident to John, and further verified that the entire chamber, which was fully sixty feet long and fifty feet wide, was covered with a layer of this copper for a height of six feet. A calculation of the value could be readily made.

John and the boys made their way out and past the fires that were still burning, and which would be relighted no more. The two absent ones were not found. They had not returned. The reason was explained when the village was reached. They were captured by Uraso before they had left the cave a thousand feet.

During the day and the succeeding night the patients improved each hour. Both of the invalid boys were able to sit up. Rogers wanted a full meal, but still none were allowed to indulge. John announced that a start for home would be made in the morning.

There was intense bustle in the village the next morning. The chief was informed that he and two of his sub-chiefs would be required to accompany them, together with one hundred of his warriors. The ten wise (?) men were also to be of the party.

There was mingled feeling of emotion in the minds of the people when they saw their great chief for the first time in the knowledge of the people humbled and taken captive by a foreign tribe.

It was well to leave them with that impression. They would soon learn otherwise, and for the first

time begin to appreciate that the white man's way is superior to their own.

The boys and Gustave were in the wagon with the Chief Oroto. The others were on foot. Occasionally John would take a place and delight in the chatter of the boys, and sometimes would listen to remarks about Oroto, that would not have been pleasant for his ears.

John didn't blame them a bit for it either. The pale, drawn faces of the two boys made them pitiable objects, and when he saw them he felt like cursing the chief who would permit such cruelties to innocent boys. But he remembered that the chief knew no better. He lived according to the best that was given him. Why was he to be blamed?

There was hardly a subject but was canvassed by the boys. The chief soon became interested, and he frequently asked Lolo questions. Before the journey ended the boys changed their opinions about Oroto. Perhaps the vivacity of the boys attracted him.

But later on, through Lolo, he began to learn things which astounded him. Muro had told his son Lolo that Harry was the one who made the wonderful guns, and this was communicated to the chief. Harry was a hero to him from that time on. Lolo told the chief about the wonderful things which they were making at the new town, and long before they sighted the place he was interested just like a common mortal.

But the Saboro village was in sight. "Moro," asked John, "how long will it take to get your family ready?"

"We shall go on with you this afternoon."

They were ready and waiting when the train came in sight. Lolo was out of the wagon and sprang to his mother, just like any other boy would do, and he told her in two minutes what had happened in fifteen days. An American boy could not have done better than that.

Was Stut's family going, too? Certainly! The boys laughed merrily. One wagon was given over to the families, containing seven women and fourteen children. But the wagons were lightened of their heavy loads of provisions and easily accommodated to emigrants.

This was a happy party. The natives never knew of such an outing. It was quite a cavalcade. Just imagine four hundred warriors, the two wagons, the women and the children, the men chanting a peculiar song as they marched, occasionally interspersed with laughter, and a constant flow of talk about the new and wonderful place they were going to, of the great white chiefs, and above all the real and unaffected pleasure that grew out of the knowledge that there would be no more war.

On the second day after leaving the Saboro village, Unity came in sight. George crawled to the top of the wagon, and, raising his hat and waving it, began to cheer. Every warrior did likewise when he saw the signal. It was a bedlam for a few moments. The Illyas chief saw it and smiled.

Unity heard the cheers. There was no more work that day. The men in the fields came in. Those in the workshops deserted their posts, and

lined up along the newly made sidewalks that had been carefully arranged several days before.

The women were out in force, and the children in evidence everywhere. The two wagons were in advance, Harry being in the lead. Not a man left the town to rush out and greet them. The Professor suggested that a more fitting welcome could be given by forming lines to receive the warriors as they filed by.

The wagon was now within five hundred feet of the end of the receiving line of the villagers. Angel, the orang-outan, was in the line also. The sight of the wagons was too much for him. He scampered along the street in that peculiar shuffling gait that all the villagers knew, and started for the wagon.

He was the only one in the town who disobeyed the orders of the Professor. He knew that George was in the wagon. He passed the first one, driven by Harry, but he was up in the top of the second in an instant, and he made his way to George's side, and looked up in his face. George put his arm around him, as he was accustomed to do, and this was sufficient for him.

The children screamed in delight, but Angel didn't mind, because he saw that George didn't. When George put his arm around Lolo's little baby sister, Angel looked at George, reproachfully, at first, but when George laughed Angel emitted his well-known chuckle, which always indicated delight, and he knew that all jealousy had vanished.

CHAPTER XVIII

BUILDING A SHIP TO TAKE THEM HOME

Great was the surprise of Oroto to find that Marmo, chief of the Tuolos, and Tastoa, chief of the Kurabus, were in the town. Greater still was the marvel to know that they were entirely free to go and come, and when Uraso announced to him that there were no restrictions on his liberty, he wondered why he had been brought from his village.

This proceeding was most unusual. During the preceding day, when they marched into the town, he had been kept in one of the buildings under guard, and had not seen the Professor, as the latter first desired to confer with John, and learn all about the facts about the chief and his actions.

Oroto was most anxious to see the Great White Chief, and when Uraso announced to him that he was prepared to receive him, he was eager to go. John thought it would be much better for them to meet alone, because it was desired to avoid all cause for jealousy among the different chiefs, and it would, probably, be disagreeable to have them present. All must be present, or none.

Uraso conducted him to the door of the Professor's apartment, and left him. As he entered, the Professor came forward, and grasped his hand and put his arm around him, and in that manner conducted him to a seat.

The chief looked at him, and saw the strong,

handsome face and the white beard and hair. He appeared to be awed by the sight, as he was affected by the kind reception. He was far from assuming the defiant attitude with which he met John.

"I welcome you," said the Professor. "I know we can be friends."

The chief was overcome by the greeting words. It was plain that he had prepared for an entirely different kind of meeting. He did not answer, but sat there with eyes riveted on the Professor, and the latter continued:

"I hope my warriors have treated you right, and that they have not injured any of your people."

When Oroto had recovered from his surprise he responded:

"Why do you call me your friend?"

The Professor smiled, and he answered: "Are you my enemy?"

This was a question which was unexpected. What manner of man was this? The Professor saw the struggle in the chief's mind, as he tried to frame a reply.

"I was your enemy; but I do not see why I should be. I was told that you were a terrible chief."

"Who told you so?"

"The wise men."

"Do you believe them?"

"No; I shall kill them, because they have lied to me and my people."

"Why do you wish to kill them? Will that do you or your people any good?"

"Then what can I do with people who deceive us?"

"Teach them to understand and know that it is better to tell the truth than to lie. When you do that you are also teaching the people what is right. If you kill them you are teaching people revenge, and revenge will not help them."

"You are telling me something new and strange. My people would not understand that. They would think I feared to punish."

"The white man does not think so. He believes that each man is entitled to his life. If he does wrong, he may be deprived of his liberty, and made to labor for others, and pleasures kept from him, but that his life should not be taken from him, unless he has committed the greatest crime against the people."

"What is the greatest crime?"

"The killing of another."

"I am in your power. What do you want me to do? What will you do with me? I did not know you taught such things."

"You are in my village; but you are free to go where you will. My chief did not bring you here to humiliate you, or to punish you. I told him to bring you here so you might know how the white men live, and how they try to make the people happy. You can see these things for yourself. Then you can understand."

"I am told that you have people here from all the tribes, and that they live together in peace and in contentment."

"Yes; and why not? Because one man was born and lives in one place, is that any reason why he

should be the enemy of one who lives somewhere else?"

"But how can we prevent them from fighting each other?"

"Let all the chiefs agree to do what is right to each other, and to their people; and treat each man the same, whether he belongs to your tribe or to some other. Do not seek revenge, but justice."

"I shall forever be the White Chief's friend."

"But you must be not only my friend, but the friend of all the chiefs. They have agreed to live together in peace. We will find work for all your people to do, so they can become happy and strong, and I want you to go with me to see the things we are doing to help the people. Before we do so you must talk to the chiefs who have been here and who know what we are trying to bring about."

Oroto sought out Marmo at once. He was the nearest in kin to the Illyas, and the Professor noted this action on his part with the greatest satisfaction. Soon Tastoa, of the Kurabus, was brought in, and no restraint was placed on any of these conferences.

When all the whites met that night you may be sure that there was a jollification that knew no bounds. What a wonderful thing had been accomplished. All grasped the Professor's hand, and many tears were shed in the joy of the meeting. Six boys and three men had been rescued from the jaws of death by the Professor and the two boys.

In less than two years they had transformed an island of savage races into some semblance of or-

derly life, and inspired the people with a new impulse. It was the first time the chiefs of the island had ever met together. Within a week all were on friendly terms with each other.

At the conference that evening the Professor remarked: "We have now put in nearly two years of hard work, and accomplished the most wonderful results. The boys want to go home, and it is right that they should. Owing to the peculiar conditions existing here, we have not been in a position where we could take any organized steps to go home. As long as any of our friends were in captivity it was our duty to remain."

"The situation is different now. We have really started a little empire here. This is the 'Empire' that Harry spoke about when we landed here. He little knew how prophetic that was. We now have the men, the material, the energy, and the ingenuity to make anything that is made anywhere in the world."

"We must build a ship—"

But the Professor could go no further. The boys were wild with excitement at the news, as they gathered about him.

"But I am coming back again," cried one after the other.

"But I am not going away," added the Professor, "because I am afraid I should never be able to come back again."

There was a tone of sadness as he said this, and it touched all the boys. It was hard to tell whether this was an occasion for joy or sorrow.

All knew what the Professor and John and

Blakely felt, and that it would become their great field for future work.

Here was also a field for the energies of the boys, whose abilities could be directed into useful channels. Commercially the island was of immense value, if properly used. So long as John and the Professor were there no wrong speculative efforts would dare to be attempted by unscrupulous adventurers.

John, together with Harry, Tom and Jim, who were the engineering force of the island, soon began the work of preparing the material for the ship which would place them in communication with the great world.

The three new boys were initiated into the crafthood which was ever widening and gaining new recruits. The natives showed remarkable aptitude for the various branches of work. But the Professor and Blakely had other ideas than to train too many of them to labor in the mechanical lines.

Here was a land, rich in soil, capable of growing any crop, or adapted to give up its bounty in the form of many valuable kinds of produce. Rubber, coffee, spices, cocoanuts, the finest fibers, in variety, and all of them now growing wild.

This land must be occupied and tilled by a people adapted to the soil and climate. The principles of agriculture must be instilled. What a wonderful work to contemplate!

The schoolhouse was ready, but there were no books. Robert had taken the preliminary lessons as an artist, and was very handy with the brush and pencil. Entirely on his own initiative, he

prepared a set of letters, containing the caps of the alphabet, and these were cut out by him, and the work so delighted the Professor that he instructed the boys how to cast the whole series at one time, so that a good stock of type was finally turned out.

"I have an idea," said Robert, "that it would be a good thing to put some pictures in the primer; just enough to make it look attractive."

"That would be fun," answered Min. "Don't say anything to the Professor about it."

The latter had already arranged a simple press, but when the latter was nearing completion, Roy burst out laughing, as he remarked: "Type is a good thing, and so is a printing press, but I am interested in knowing where we are going to get the paper."

"Paper?" exclaimed George; "lots of it growing all about here." And he looked at the boys a little maliciously. "All we need to do is to go out and gather it."

"Paper growing? Well, I have seen many things here, but that is something new to me."

"Do you know what the plantain tree is, the tree with the big sprawling leaves? Those leaves will make good sheets for printing on."

The Professor heard the last part of the conversation, and remarked: "We might as well make paper, and I have already asked Harry to make a grinder for furnishing the pulp. We have the finest paper stock in the world."

"Yes," exclaimed George; "the ramie."

"No; not that. There is a reason why hemp,

"The party plunged into the forest, taking the direction which Tom and Ralph had gone on the former trip"

[See p. 235]

and many other fibers are better than that. Do you recall the peculiarity about ramie?"

Harry remembered. It resists moisture, and while it makes an excellent paper would be diffi-

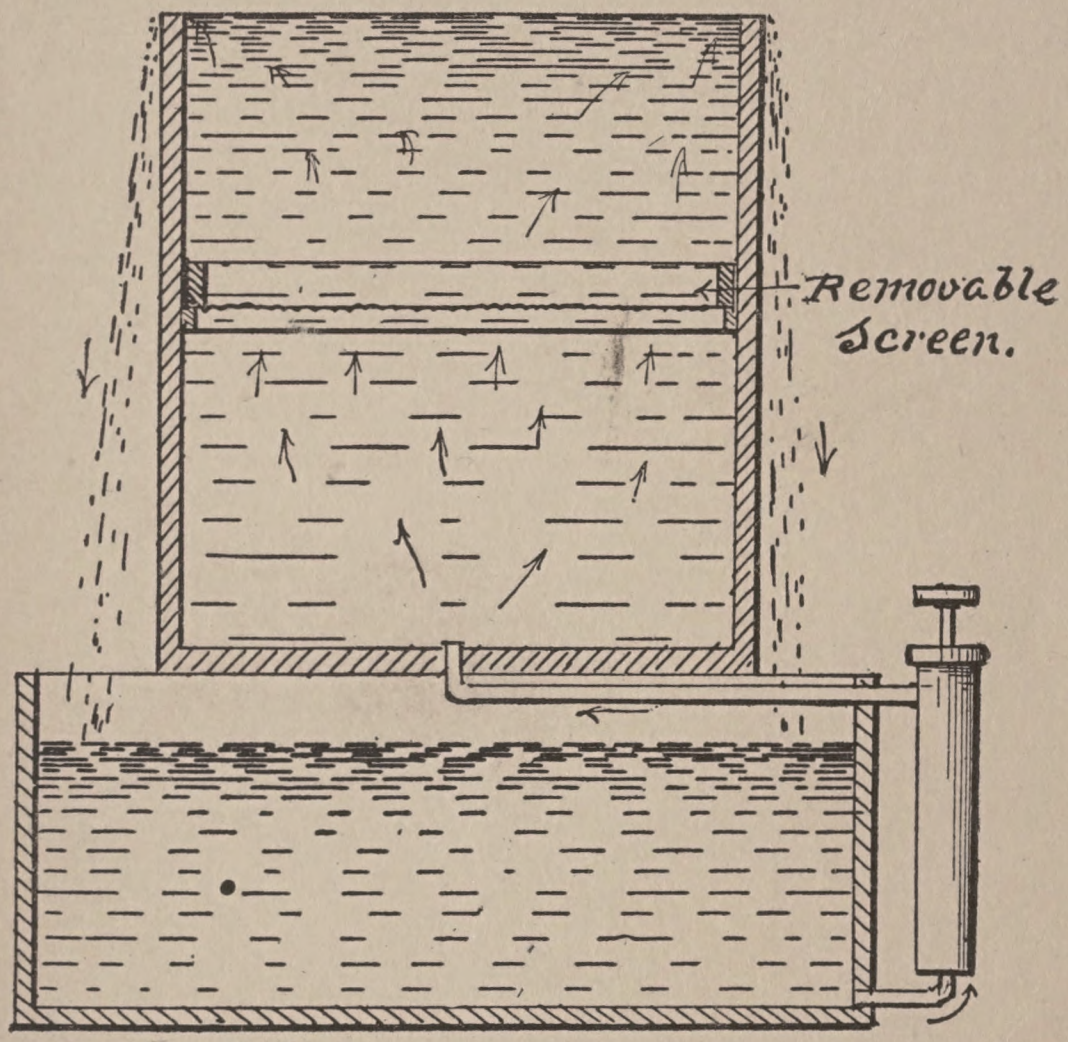


Fig. 22. Paper making machine.

cult with their crude means to turn it out satisfactorily. The grinding machine was a simple affair, and the fiber was fed through again and again, until it was cut up into short lengths.

The principal thing, however, in paper making is to get it the same thickness. "It will take too

long to make a cylinder, which makes the paper even, and distribute the pulp perfectly, and in the absence of that I have ordered an apparatus which will turn out a sheet at a time."

The Professor then exhibited a drawing, and continued: "Notice the box, which is two feet square inside and two feet high. See this cleat all around the inside, six inches from the top. That is to hold the frame of a cloth web, which fits in the box exactly."

"At the bottom of the box is a pipe, right in the middle. This pipe is for the purpose of carrying the water into the box. Below the box is a larger box, and this contains the water which has the pulp mixed with it, just enough of the pulp to make it look cloudy.

"The water in the box is carried into the box by the pump. When the screen, or web, is placed in position, and the pump set to work, the water, carrying the pulp, moves upwardly in the box, and the fine particles of pulp are caught by the screen and held there, the little fibers lying crisscross over each other.

"Every minute or so the screen with the paper mat on its underside must be taken out and another put in, and the matted paper on each screen put under a press, and the water squeezed out, after which it will readily peel off the screen, and when it is dried it makes a good blotting paper. To make a writing paper of it, the sheet must be run through a number of heavily weighted steel rollers, but we don't need that for printing our books."

The paper was made in that manner, and the Professor was delighted when he saw the illustrations. Thus the first serious attempt was made to begin the teaching of the children, and when the books were ready the boys were all happy to undertake the work of teaching. It was here that the Tuolo medicine men were utilized, and it may be said to their credit that they found the new calling agreeable and pleasant.

But there is still so much to be said about the town, the people, the actions of the chiefs, the work that was being prosecuted, the farms and plantations that were started, the manufactured articles turned out, the new houses erected everywhere, and the intense interest exhibited by the people under the new order of things.

The boys knew they had been a great factor in the regeneration of the island, and were proud of it. Lolo, and boys of like ages with our boys, were given special training, due to the suggestion of the Professor. Some were taught the theory of medicine, as the necessity of proper medical treatment was essential. Many received the rudimentary knowledge of carpentry and other occupations from John.

The ship was the principal topic of conversation, and to that the main energies were directed. The finest oak trees were cut and brought in; a new and larger sawmill installed; the machine shop was busy day and night in the making of two new lathes, a planer, and several drilling machines.

During the rush and the excitement of all these

new enterprises, the boys could not forget their earlier experiences, and about the mysterious things which formed parts of their adventures.

To enumerate all of them would take too much space, and be unnecessary, but some of them had an intense personal interest, and they recalled how the missing flag was accounted for when John appeared; the removal of their boat at the Falls of South River was explained; the discovery of the light beyond the West River really indicated the location of the savage village.

But there were other things still unaccounted for, and the boys craved a solution to the mysterious happenings. Who wrote the message found in the *Investigator's* lifeboat, No. 3? Who took the flagstaff at Observation Hill? Who placed the crude oars and the strange ropes in their boat which was found stranded on the sea beach ten miles from the place where they left it?

The boys determined to know these things, and they trusted to the future to be able to give the answers.

Little of the time was devoted to pleasure now. The great forest to the west was looked on by the boys with longing eyes many times. They had heard about the experience at Blakely's old home on the hill. One day Harry said: "There is one thing lacking in the town."

"What is it?" asked Tom.

"The American flag."

"Good! We must get a fitting flag pole for that."

All the boys conspired together that night.

They would go to the great forest and bring in the finest pole to be found. Jack and Jill and Angel must go with them; and Lolo and his best boy friend were invited.

Early in the morning, without giving anyone an idea of their intentions, the guns and the bolos were loaded on the wagon, and plenty of provisions, you may be assured. George and Ralph manned the large boat, so that the crossing of the river would be facilitated. The wagon still had the fort sections, which were taken along so that could be floated across.

Within an hour the main river was reached and the float sections attached, so that the yaks plunged in and drew the wagon across, while the boat was drawn up on shore to await their return.

The party plunged into the forest, taking the direction which Ralph and Tom had gone on the former trip. Quantities of game were bagged, but there was no exciting incident. The pole was the main thing, after all, and when they tramped in every direction the selection was narrowed down to two fine specimens of shellbark hickory, and one was felled and trimmed, and after hoisting one end on the wagon, the other was put on the truck and the party drove into Unity in the afternoon.

The inhabitants swarmed the streets at the novel spectacle. The Professor, John, Blakely and Rogers instantly divined the meaning of the pole.

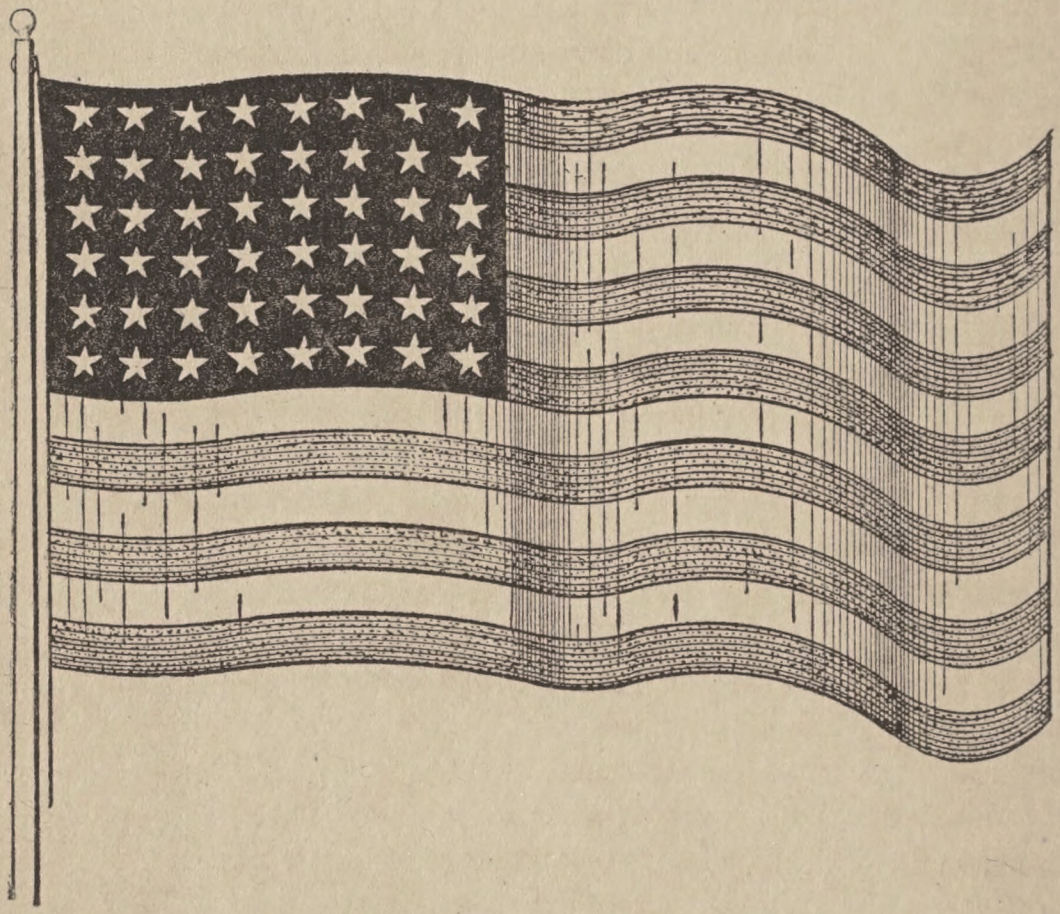
"Where shall we put it up?" asked Harry.

"Right in the center of the town," was the Pro-

fessor's response. "To-morrow is flag-raising day, and it shall be a holiday!"

Before night the hole had been dug, and the immense pole erected.

When "Old Glory" went up the next day there was nothing lacking but the music; the hats of everyone came off as the flag slowly ascended, and the cheers that came from the throats of the natives could not have been more intense, nor the enthusiasm greater, if participated in by genuine Americans.



THE END

GLOSSARY OF WORDS

USED IN TEXT OF THIS VOLUME

Astrologer. An interpreter of the supposed influence of the stars on the destinies of man.

Accumulation. To add to; gathering little by little. A store of things.

Acquiring. To receive or gain in whatsoever manner.

Accosted. To speak to; to address; to approach.

Adequate. Sufficient; enough.

Alluring. That which attracts; to have a fancy for.

Alternative. Either one or the other.

Animated. Lively; sparkling; exhilarating.

Apportion. To divide and distribute or assign.

Aptitude. Suited to the work; well adapted.

Betokened. To give a promise or evidence of.

Cardinal. The main feature; the original.

Calcareous. Partaking of lime.

Capillary. That capacity in liquids to cohere to material.

Celerity. Quickly; with speed.

Climax. To bring to a conclusion.

Chaparral. A dense cluster of small trees.

Cooperation. Acting together; in concert.

Concise. Short and to the point.

Cohesive. To stick together; to adhere to each other.

Comprehend. To understand.

Compact. In a small space.

Concentrated. To bring together.

Commotion. Not orderly; violent agitation; tumult.

Cringed. To bow in servility; to wince.

Deterred. Prevented; kept from.

Devoid. To be without; bereft.

Depredations. The act of plundering or laying waste.

Decorum. In an orderly manner.

Demoniacs. Influenced by demons, or possessed with bad spirit.

Detained. Held as a captive.
Deftly. Neat and skillful in action.
Diagonally. Across from corner to corner.
Dismantle. To take apart; to dissever.
Discernible. To see.
Disinfectant. To make germ proof; to make sanitary.
Diversified. A variety; having different qualities; many of the same kind.
Disclose. To show; to advise or inform.
Doctrine. That which is taught or set forth for belief.
Drones. Those which are not busy, or prone to shirk.
Effusive. Talkative.
Emboldened. One who is encouraged to go forward.
Entrapped. One who is caught by some design on the part of another.
Emotional. An excitement of the mind.
Emaciated. Lean; thin from want of food.
Emulated. To copy after; to take pattern from.
Enumerated. Counted.
Entrancing. To put into a state of delight.
Ethics. The philosophy of morals.
Evolutions. A term employed to show the manner in which soldiers are trained.
Factor. One of the elements in a problem.
Fantastical. Peculiarly garbed; out of the natural manner.
Fascination. A peculiar drawing to; pleasant attraction.
Function. Any specific act or power that belongs to an agent.
Gratified. Satisfied; well pleased.
Hilarity. Joy; the state of being demonstratively happy.
Identical. The same; exactly alike.
Impulse. That which is done at the moment.
Imprecations. To hurl defiance; to bring down maledictions.
Impressed. To produce an effect; warned.
Imperiously. In a haughty manner; in a way to indicate power.
Imitated. To do in the same manner.
Initiated. To bring into; to make familiar with; to install.
Imposing. Adapted to make an impression.
Interspersed. To put between or among.
Indication. To show; to give an idea of.
Instilling. To educate; to teach.

Installed. To establish; to put in the proper place.
Inculcate. To teach by principle, or otherwise.
Indignant. Anger or scorn aroused by a wrong act.
Instigation. To entice another to do a thing.
Indefatigable. Continual act in doing a thing; not weary in work or play.
Innumerable. A large number; many of the same kind or thing.
Indited. To put into words or writing.
Irritablity. Rubbing against; friction of part.
Irrepressible. Difficult to control; hard to keep down.
Instrumental. The means by which a thing is done.
Malediction. A wish that harm may come; a curse.
Medium. A means; an object that enables the carrying out of a design.
Muster roll. The list of a set of men who have combined for an object.
Maneuvered. The arranging of forces in a certain manner.
Naturalist. One versed in natural history.
Omen. A sign; a favorable or unfavorable issue.
Pendant. Hanging; an article suspended; swinging below.
Penetrated. Going into; entering a body.
Phase. One form; a particular manner.
Projection. To give out; a throwing, shooting or sending out.
Precarious. Rather dangerous; not the safest.
Profusion. A quantity; many of the same kind or quality.
Presentiment. Believing or feeling beforehand.
Prescribing. Setting forth; explaining in detail.
Precipitous. Doing quickly; acting without considering results.
Restriction. Within certain bounds or limits.
Restoration. To bring back to its original form.
Requiting. To pay; to give just dues.
Requisition. The necessity for a thing; to call for some quality or article.
Regeneration. To make over anew; to better.
Reconstructed. To put into a better condition; or to restore to its original form.
Rhythmic. Made to correspond in sound, in a regular or determined time.
Rudimentary. Original, or basic.

Saturated. To thoroughly fill a substance, as with a liquid so it will not hold more.

Scantling. A piece of sawn timber, used as the upright support of a building.

Seclusion. Hidden; kept out of sight.

Semblance. The same as; likened unto.

Simulating. To copy; to imitate.

Smelter. A furnace for melting metals.

Solicitation. Asking for anything; requesting, by petition or otherwise.

Stimulating. To encourage; to cause to act.

Stalagmite. An incrustation on the floor of a cave or cavern.

Stalactite. The calcareous or lime hangings on the walls and ceilings of a cavern.

Stipulated. Set forth in some particular manner.

Tactics. The science or art of military evolutions.

Talisman. Something that produces or is capable of bringing about a wonderful effect.

Tempered. The quality in a metal of hardening.

Tissues. The flesh, muscles and organic materials of a body.

Tournament. A festival of ancient time; games and feats of arms.

Transmitted. Sent away; forwarded to a distant place.

Transport. Carried away by joyful news or emotions.

Typical. A good sample; the like in kind.

Unaffected. Not influenced; without emotion.

Undulating. Wavy; rolling.

Unscrupulous. Not guided by a right course; wrongful actions.

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